

Profiles in the Creative Economy

The Creative Entrepreneur



































Industrial Strength





































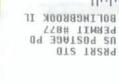












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Meet the Creatives

"Art is the handmaid of human good."

aybe the "handmaid" thing is a clue, but chances are, few people would associate the sentiment above with the early 19th century, let alone the birth of the Industrial Age in America. Even fewer would imagine that the phrase was chosen by a mayor as a city motto. But for more than a century and a half, "Art is the handmaid of human good" has appeared on the official seal of the city of Lowell, Massachusetts.

The origin of the phrase is unknown; given its application in a city that was dependent upon the skill of its millworkers (especially young women - handmaids indeed), the motto is often interpreted as a tribute to manual skills or a celebration of craft. Its real meaning is of course much broader.

We had only to listen to the recent Congressional debates about stimulus funds to understand how far art has since fallen in the political firmament. Too many politicians and policy-makers view support of the arts as a nonessential indulgence: art-for-art's-sake is frivolous when Art has lost his job and can't feed little Artie, Ir.

And so it may be a surprise that among the greatest champions of the arts are some economists and politicians people who have not lost sight of the critical relationship between art and industry that was commonly acknowledged by our 19th-century forebears. They understand that support of the arts is not indulgence; it is vital to fostering creative thinking and the innovation that fuels our economic system. They know that if there were no art education, there would be no Apple. In this crowd, "creative" has moved from adjective to noun, and the creatives are those people who generate real and meaningful economic activity - jobs, revenue, products, services - through organizations and enterprises that are based in the arts: cultural institutions, of course, but also advertising firms, publishing houses, videogame developers, design firms, and countless others.

The focus on the Creative Economy is relatively recent so new, in fact, that researchers are still analyzing data that will

help us understand its mechanisms fully. Economist Richard Florida introduced the concept to the public with his 2002 book The Rise of the Creative Class, which famously suggested that cities with active arts communities, significant gay populations, ethnic diversity, and tolerance of bohemian lifestyles are more apt to have a competitive edge. The subsequent rush to promote local manifestations of the Creative Economy threatened to join pedestrian malls, festival marketplaces, and convention centers in the long, failed lineup of desperate measures by beleaguered economic development and planning directors.

But if we set aside the temptation to promote the Creative Economy by artificially isolating it through zoning and well-intended regulations into cultural districts that are the equivalent of petting zoos, we will find that the creatives are already all around us - invisible only because no one previously bothered to identify them, let alone count them. Some have built large businesses with impressive staffs and revenues; some are employed by larger entities that are part of other economic sectors. And still others - many others work successfully in small businesses and proprietorships that offer a model for new entrepreneurial behaviors: nimble, fluid, collaborative

Support of the arts is not indulgence; it is vital to fostering creative thinking and the innovation that fuels our economic system.

With our large, young, talented workforce, an impressive array of schools and institutions that prepare and sustain creative workers, and an established base of technological innovators who understand the value that right-brain thinking can add to left-brain processes, this region is perhaps better prepared than any other in the country to develop a Creative Economy of global standing. This isn't art for art's sake. It's art for our sake.

Elizabeth S. Padjen FAIA Editor





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Letters Letters Letters

Thank you for your "Gateway Cities" issue

[Summer 2009]. I would like to underscore the importance of strengthening civic life in these cities. This is more than a platitude — it's the most fundamental element of their long-term recovery. When residents are not connected to each other or to public life, it is easier for low expectations to develop, and for institutions, services, and quality of life

While these bad habits usually develop over decades, it is possible to begin turning it around quickly. The first step is to create forums where residents, businesspeople, municipal officials, and nonprofits can come together to share information, build trust, establish personal relationships, and have constructive public discussion. Turning these conversations into a shared long-term vision for the city that everyone can relate to and get excited about is the next step. This has been shown to be another element of successful revitalization stories in places like Chattanooga, Youngstown, and Kalamazoo.

Furthermore, place-making and economic development initiatives that support the vision should be designed to build the assets and improve the quality of life of the people who already live in these cities. The middle-class families that policy-makers so desperately covet will not in the short-term be attracted from the outside — they will be grown from the working-class families who already live there.

André Leroux Massachusetts Smart Growth Alliance Lawrence, Massachusetts Co-author, Voices from Forgotten Cities

Matthew Frederick's article "Radical Urbanism" [Summer 2009] was truly a breath of fresh air. The problems with the planning process he mentions are even evident at the small-town level, where I live and work, where big-city planning restrictions and requirements are put in place with little or no thought to the

effect on the small town's economy and what made that small-town lifestyle so appealing. It's interesting that the current approaches to planning are attempting to duplicate that same small-town feeling in minutely planned new communities that often cost huge dollars to move into and live in. Meanwhile, small towns are still using older planning schemes that sap the vitality out of their downtowns, leaving vacant buildings that are limited by planning laws to one possible use, killing any hope for the revitalization of that same downtown core.

This whole problem is another example of the "central planning" type of thinking that is evident throughout our society, at every level of government. There is a real fear in some circles of allowing people the freedom to pursue their own selfinterest, thereby benefiting the culture as a whole.

We can only hope that Mr. Frederick's thinking becomes more widespread, but it may be too late for many small towns and communities in this country. We have become a culture of dependents, trusting not in ourselves and our own efforts and initiative, but in government's benevolence for our well-being. And government is always ready to take that responsibility and in the process, take more and more of our freedom and potential for personal fulfillment.

> Keith P. Hemingway, RA Bristol, New Hampshire

The scope and nature of your coverage

of our struggling Gateway Cities [Summer 2009] makes one appreciate how vital it is that our professional community has such an enlightened and engaged journal that is not afraid to take on such broad and seemingly intractable issues. The prosperity of the region and of Boston is at stake and ArchitectureBoston is to be congratulated for helping to illuminate the challenges as well as the vast potential that these cities hold. There are difficult decisions to be made during such

challenging economic times; yet there is still much to be optimistic about. I hope that this issue will inspire us all to renew our commitment to supporting policies and initiatives like historic tax credits and the South Coast Rail project that reach beyond metropolitan boundaries and are crucial lifelines for many of these communities.

Edgar Adams School of Architecture, Art & Historic Preservation Roger Williams University Bristol, Rhode Island

The current economic crisis and stimulus efforts are a rare opportunity for us to take stock of our profession and chart new directions (or strengthen existing ones) for practice, policy, and pedagogy that truly make a difference. In many ways, the Summer 2009 issue of ArchitectureBoston foretells a path that architects and urban designers must follow in order to become even more impactful in the shaping of our cities and the critical challenges that we face.

Let me suggest a few guideposts for action. First, drawing inspiration from these excellent articles, asking difficult and pointed questions, is just as crucial as finding design solutions. Second, the issue suggests a re-examination of our values as architects and urban designers, including a turn toward humanist values, such as those outlined by Boston's own Kevin Lynch in his masterpiece, Good City Form. Third is to develop a broader and more sophisticated sense of what design truly involves, including the design of longterm processes and consequential policies, as the articles suggest. Fourth, we can train future generations of architects and urban designers to be extremely openminded and innovative (beyond just form and materials) through experimental and open-ended studios, critical examination of relationships between urban design and public policy, and learning through a deep understanding of international

comparative urbanism, especially from some of the most resourceful and innovative cities in Asia, Africa, and Latin America. Finally, a self-critical and questioning attitude (rather than the posturing some star architects are prone to do) results in being open to change, to constant learning, and to continued

innovation.

Aseem Inam PhD School of Architecture and Planning Massachusetts Institute of Technology

For those of us who live outside Route 128, it's been a long time since we believed

that anyone outside of these cities cared enough to recognize the importance of these vital, regional hubs to our state's future. The spotlight shed on their potential by a periodical with "Boston" in the title is significant and welcome.

As the former mayor of one of these cities, Fall River, I know that public attention and education is a crucial first step in building support for the necessary re-investment these cities need to thrive. These 11 outlying communities, with great histories that, at one time, saw them lead the world in a variety of industries, brought a richness to Massachusetts of culture and wealth. Although suburbanization and de-industrialization have brought new challenges for them to face, these cities have come together to make the case that they are not a special-interest group but, rather, a gateway to a new economic future in our state, providing livable neighborhoods where families can live and work and where the innovative spirit that once symbolized their collective enterprise can be present once again.

Greater Boston and everyone in the Commonwealth needs to care about what happens in these cities, in order to ensure balance in our state-wide economy and to support sustainability and prevent further sprawl. And the residents in the communities around these cities need to understand that their regional economies are dependent on the health of these cities.

Edward M. Lambert, Jr.
The Urban Initiative
University of Massachusetts Dartmouth

Typically, large-scale visions for cities' renewal focus wholly on the needs of adults — as if no toddlers, children, or youth walked the streets, or as if those young people would not inherit the streets and buildings being planned. So the "Greetings from MY City" project [Summer 2009] is a welcome change — as were the bold images of their city that the young photographers produced.

In developing a series of community cultural plans, we have asked young people to map the spaces in which they learn and create. The resulting maps and interviews reveal young people as sharp analysts of their neighborhoods and cities. They point out that few cities bother to build an infrastructure that supports the creativity of the next generation. They are equally clear about what would make a difference: safe, unstructured 24/7 spaces where they can do their work; housing with artist studios so they can learn from experts and mentors; public transportation that connects them to out-of-school learning opportunities; jobs where they can learn and earn; and an information architecture that would connect them to programs, scholarships, and work opportunities.

There is much talk of creating cities that rise, like phoenixes, from the ashes, because they foster local innovation, artistry, and entrepreneurship. But in the end, this cannot only be about building arts districts or loft apartments or urban farms that attract new adult populations: it must also be about developing neighborhoods and activities that sustain the next generation of citizens who want and know how to invest in, inhabit, and enliven their communities.

Dennie Wolf WolfBrown Cambridge, Massachusetts

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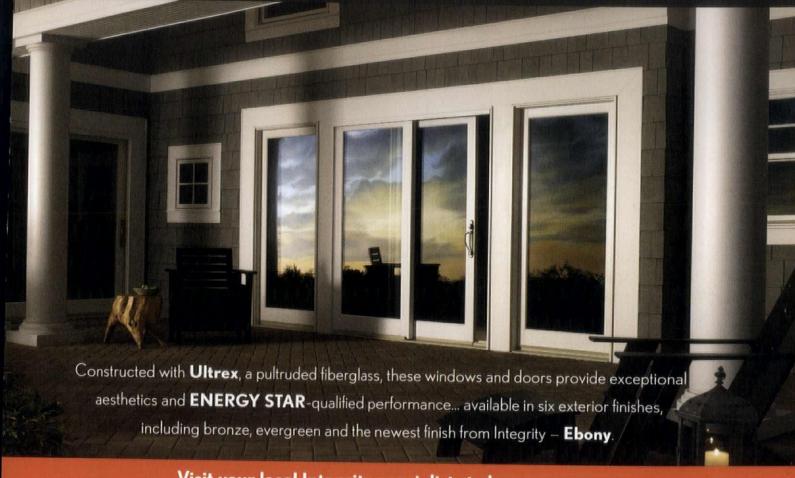
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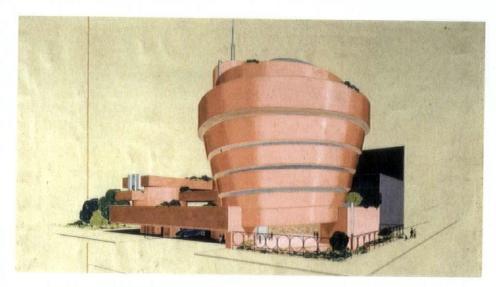
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Solomon R. Guggenheim Museum, New York; 1943–59. Ink and pencil on tracing paper. © 2009 The Frank Lloyd Wright Foundation, Scottsdale, Arizona.

Frank Lloyd Wright: From Within Outward

Guggenheim Museum

New York, New York May 15-August 23, 2009

In celebration of the 50th anniversary of

Frank Lloyd Wright's iconic building, the Guggenheim is hosting its first exhibition of his work. Featuring 64 projects - both built and unrealized — this exhibition offers an intimate view into his design process through 200-plus original drawings as well as newly commissioned models and digital animations.

According to Phil Allsopp, president/ CEO of the Frank Lloyd Wright Foundation, Wright completed over 1,100 designs; the archive is vast enough to supply an exhibition of this size annually for 110 years. The curators chose what they believe are Wright's best drawings, and the usual suspects are in attendance (Unity Temple, the Taliesens, and of course the Guggenheim itself), but his unbuilt projects, many on display for the first time, are perhaps some of the most fascinating.

Of his design for the San Marcos-inthe-Desert Resort, a victim of the 1929 crash, Wright said, "I have found that when a scheme develops beyond a normal pitch

of excellence, the hand of fate strikes it down." This held true for the captivating Gordon Strong Automobile Objective and Planetarium, the hand of fate being an unhappy client who declined to build it. Its form was an upside-down predecessor to the Guggenheim — modeled in section for the exhibition, complete with twinkling stars. Also stunning are Wright's drawings and a new topographic model of the Huntington Hartford Sports Club/Play Resort that daringly cantilevers from the museum's wall.

While visitors of the Guggenheim often take the elevator and then meander down its spiraling ramp, this exhibition is arranged in a loosely chronological order from the rotunda floor upward. It is only fitting to culminate at the top, mirroring the path of Wright's career and legacy.

Murrye Bernard is a freelance writer in New York City and a contributing editor to eOculus, a publication of the AIA New York Chapter.

Sprawling from Grace. **Driven to Madness**

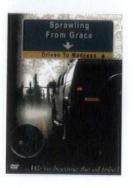
Directed by David M. Edwards Produced by EMotion Pictures, 2008 DVD, 82 minutes

A somber mood prevails throughout Sprawling from Grace, Driven to Madness, a primer on the urgent need to reform our culture's automobile-dependent ways. A who's who of national visionaries in energy. transit, and sustainable development tell the story, with appearances by some familiar Bostonians (David Dixon, Michael Dukakis, Tad Read).

Attempts to lighten the mood with nostalgic, black-and-white clips of the American love affair with the automobile and suburban life instead leave one wistful for simpler times. Though it tries, the film fails to deliver the emotional weight of a call to action.

More unfortunately, it neglects the ready availability of solutions. Bad news is emphasized over the good despite the positive data now emerging from cities (such as Portland, Oregon) in the forefront of the sprawl battle; images of today's success stories - walkable shopping streets, mid-rise districts with transit stops - are fewer and less compelling than they could be. The Scared Straight model is indeed scary, but fear is not a reliable motivator.

Gretchen Von Grossmann AIA, AICP is the principal of Von Grossmann & Company in Boston.



Ecological Urbanism: Alternative and Sustainable Cities of the Future

Harvard Graduate School of Design April 3–5, 2009

One subtext of this conference became clear almost immediately when keynote speaker Rem Koolhaas cursed architects for having no answers. The message was repeated over three days: Attempts to solve design problems by focusing only on architecture are inadequate and ineffective responses to real urban problems in this urban century. Design practice as it has been is over. Design practice must change in order to address pressing issues of climate change, social and economic equity, and health. The way forward was not at all clear, although the range of presenters - architects, historians, humanists, theologians, bureaucrats,

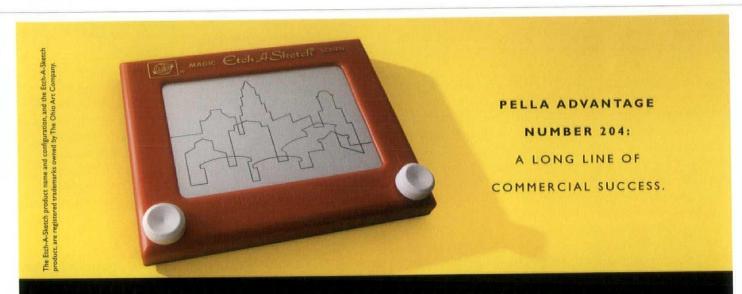
academics, agronomists, artists, scientists, inventors, landscape architects, planners, politicians, a university president, a dean, and a mayor — symbolized the core idea that multiple disciplines working together are essential.

Its meaning elusive, the term "ecological urbanism" held an umbrella over everything "sustainable" while emphasizing the urban. The varieties of urbanism referenced over three days ranged from "ethical" and "landscape" to "reconsidered," "dynamic," and "user-generated." The conference was extremely well plannedincluding an exhibition, forthcoming book, and website with podcasts (http:// ecologicalurbanism.gsd.harvard.edu) yet it conveyed a messy sense of confusion and incoherence, very much a work in progress. The need to craft a new language seemed to be another subtext. Perhaps the unadorned term "urbanism" is an adequate place to start and a useful focus as thinkers come to understand the complexity of the city's dynamics while being constrained by realizations about natural-resource limits

and damage to the environment.

It is good news that the powers that be, including now Harvard as well as the City of Boston, recognize both the need and the opportunity to make important changes to the status quo and to embrace new knowledge, with the understanding that cities and regions must be part of the solution. Alex Felson of Yale University asked the best question: "Is there a way architects can and will take in data and processes of ecology and make a difference?" As the conference made clear, the answer will require architects to adopt a broader stance as engaged creative thinkers and activists finding new ways to bring the knowledge to bear across disciplines, collaborating with peers in every field. It won't be easy, as Andrea Branzi cautioned: "Interdisciplinarity is not a comfortable affair."

Rebecca G. Barnes FAIA has practiced architecture, urban design, and planning in Boston, Providence, and Seattle and was the chief planner of the City of Boston.



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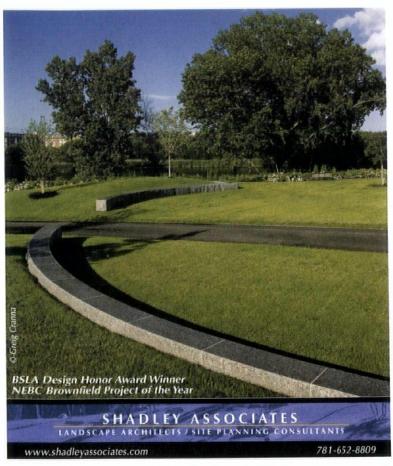
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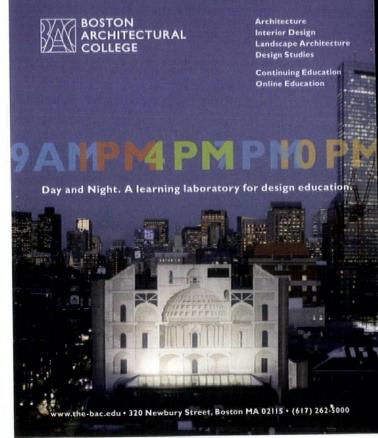
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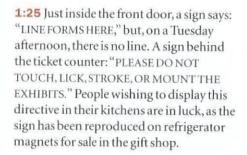




Public Displays of Affection

The place: New York City's Museum of Sex, located in a small nondescript mid-century commercial building in the middle of what used to be called the Tenderloin District.

The shtick: Put it out there. Display it frankly, the way other museums display paintings, or dinosaur bones, or decorative arts objects, or artifacts of war.



1:29 The gift shop is cheerfully smutty. Corkscrews shaped like naked women; coasters printed with photos of naked men; an orange juicer resembling a pair of breasts ("Squeeze two halves at the same time"); books about bras and Japanese bondage; The Illustrated Book of Orgies; fur-covered handcuffs; anatomically explicit pasta, origami, balloons, and blown-glass swizzle sticks; and various small vibrating objects including a yellow rubber bathtub duck.

A couple is giggling quietly at the back of the shop. "We should get this for Arnie and Sarah," she says, but his reply is inaudible and they leave without buying anything.

1:34 Gallery 1, a bright, open space with windows looking onto Fifth Avenue, is displaying a show called "The Sex Lives of Animals." Visitors are welcomed by a large white plasticine sculpture of an excited ape. The aesthetics of the show are upbeat and scientific: graph-paper-patterned walls featuring headlines like

"Parthenogenesis: Living Without Sex" and "Sexual Cannibalism." A man and woman in their 60s — tall, both with short silver hair, wearing fanny packs — peer at an exhibit comparing the genitalia of various species. "I'm not certain here which is the male and which the female," she says, of a large photo showing two barnacles.

"Dissection would tell more of the story," he says.

1:38 Another man — nearby but not too nearby; in this museum, few people gather in groups — whispers to the woman he's with: "You saw the collection of penis bones?"

"Yes, but I didn't think they had bones."
"Well, I guess maybe in some species
they need them," he answers earnestly.

1:44 Two women in their 20s pause beside a plasticine statue of an orgy involving three white-tailed deer. "Is this for real?" one woman whispers to the other.

1:52 At the back of the gallery, a number of people stand around watching a video about bonobos, Congo apes who, according to the chirpy audio narration, have "a rich and varied sexual repertoire." The film continues for several minutes — lots of frantic, happy-looking primate action — while the people stand around and watch in solemn silence. The narrator explains that there is often same-sex



A Photo by Joan Wickersham.

activity between male bonobos, and even more between females. "The bonobo, our closest relative, lives in a society in which the goals of the human feminist movement have been achieved!"

2:05 Upstairs, Gallery 2 displays an exhibit called "Sex and the Moving Image"museum-speak for movie sex. In contrast to the white laboratory vernacular of the downstairs gallery, this long narrow room is designed as pure peep show. It's dark. To the side are a number of little open booths with screens on the walls. The main space is divided into two corridors by a long half-wall suspended from the ceiling and ending several feet above the floor, so that the people standing on either side are hidden from each other except for their feet and a little bit of leg. This suspended partition is studded with screens, each of which runs movie scenes in a constant repeating loop. Loud music pulses through the space, providing an audio cover under which conversation can take place except that there isn't a lot of conversation. People stand before the screens, silent, watching the butter scene from Last Tango, the rape scene from Deliverance. Each screen is capped by a blue-lit sign assigning some academic-sounding category: "Mainstream: Same Sex," "Youth and Virginity," "Sexploitation," "Nudist Films."

2:09 An anguished cry from one of the booths: Greta Garbo as Anna Christie confessing harshly, "Yes, it's that kind of house. I hate men!"

2:14 Beneath a sign that says "First Experiments," Hedy Lamarr swims in Ecstasy, Greta Garbo smolders in Mata Hari, Mae West vamps in I'm No Angel.

2:22 "Metaphorical Sex," says a prissier sign nearby, above a screen running Hollywood clips from the late '30s through the '50s, when nothing could be shown but a lot was implied: Cat on a Hot Tin Roof, Gone With the Wind, Notorious, A Streetcar Named Desire.

2:31 And just beyond that, from the same era but apparently belonging to a different world, a stag film gallops cheerfully along: woman shows up at man's door, peels down, does stuff, then prances naked to the phone, dials a girlfriend, and presto! the friend rings the doorbell, eager to join the party.

"Yes, it's that kind of house," Greta Garbo moans again through the darkness, her film loop having run full circle."I hate men!"

2:35 Off to the side, along the wall of smaller peep show booths, is one large booth fitted out with several benches. The graphic on the screen says "Volume I: Advanced Sexual Techniques and Positions," produced by the Sinclair Intimacy Institute. "Play video" is invitingly lit on the menu, but no one does.

It's incredibly explicit and mesmerizingly boring.

2:37 Only one screen attracts a big group. "Celebrity Sex," where the loop includes the infamous Paris Hilton video. A crowd of people stands around watching the tape. It's incredibly explicit and mesmerizingly boring. She seems as intent upon displaying her manicure as her prowess, and the only visible part of her boyfriend is a little short on personality. But the audience stays with them, gaping, through the whole dull marathon. Then the tape switches

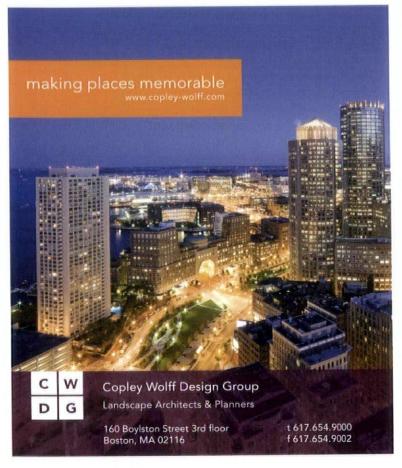
over to a re-enactment of the John Wavne Bobbitt incident - and the crowd instantly scatters and vanishes like a school of fish dispersing at the arrival of a Great White Shark.

2:42 An unusual occurrence in the museum: an animated conversation between a man and a woman. They are standing in one of the little peep show booths, watching films of the faces of people having orgasms. These visitors are speaking loudly and unselfconsciously! They're not afraid of being overheard!

And, when overheard at closer range, they turn out to be speaking in Swedish.

2:46 Suddenly an audio track comes piping through the gallery. Some intrepid couple has pressed the "play video" button to start the instructional technique film. A recorded man's voice confesses, with the kind of earnest faux-candor common in infomercials: "It seems that every time we make love, I'm still fumbling around in the dark."

And, not to be outdone, a woman's





Massachusetts is home to a wealth of design talent, firms and education. DIGMA promotes the growth of a strong design economy through collaboration and innovation. Learn more at: www.digma.us

voice announces "I know I could enjoy sex more if I just felt better about my body."

Several booths away, Greta Garbo moans out her disillusionment yet again.

2:50 Walking down the hall to Gallery 3, the soundtrack from the instructional video is still, plaintively, audible: "We're here to take away the mystery and expose the beauty and depth of our organs."

2:51 Gallery 3 isn't a lab or a peep show; it looks like a museum. Glass display cases, labeled exhibits, overhead track lighting. The exhibit is called "Spotlight on the Permanent Collection." Essentially, it's an attic — a jumble of racy odds and ends. Scary-looking old gynecological instruments. Quaint sex-education pamphlets, for both schoolchildren and adults. Erotic Japanese and Indian prints, old French postcards, nude male bodybuilding shots, cells from animé movies, Picasso lithographs, burlesque and pinup photos. A baldacchino-like structure in the middle of the room: a bondage frame. Most people give it a wide berth, but the Swedish couple

walks right in, talking and gesturing, gazing curiously up at the various joints and pulleys.

2:53 As with the bonobo soundtrack in Gallery 1 and the music in Gallery 2, this gallery is also filled with sound to create an audio privacy zone so people can speak softly to each other without being overheard. Here it's the soundtrack of a documentary film about an artist who makes pornographic dioramas and movies using robots made from Barbies and GI Joes. "Most Barbies are resculpted. You sand 'em down, add a cranium," he explains. "This is Madam Robot's artificial insemination machine."

2:55 A display of life-size dolls, including one called "Virtual Girl: The Ultimate in Sexual Reality." Displayed along with her are various interchangeable accommodating attachments. "Ewwww," says a female viewer, one of the few really audible exclamations of the entire afternoon.

2:56 In a nearby case, a model of a female

torso made out of foam, shielded by a sheet of Lucite with holes cut out over the figure's breasts. "PLEASE TOUCH GENTLY," the sign says; but the breasts are cracked, gouged, nearly ripped off.

3:00 Gallery 3 is not a room people linger in. Mixed in with the jauntily kinky and the quaintly coy is an undertone of misogyny. Or maybe there's just so much of this stuff you can look at in an afternoon. Or maybe people are tired of being so unnaturally quiet and polite.

3:02 A man and a woman hurry down the stairs, back to the lobby. At the bottom of the staircase is a security guard. "Did you see everything?" he asks seriously, as if a negative answer would require that he send the couple back upstairs to inspect whatever they might have missed.

"Yes," the woman says firmly. "We saw it all."

Joan Wickersham's memoir, *The Suicide Index* (Harcourt), was a 2008 National Book Award finalist.



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PARTICIPANTS

Karl Baehr PhD is the director of the business and entrepreneurial studies programs at Emerson College. He was named one of the top professors of entrepreneurship in the country by Fortune magazine in 2007.

Beate Becker is the director of the Design Industry Group of Massachusetts (DIGMA).

Nancy Fitzpatrick is the chair of the Berkshire Creative Economy Council. The owner of the Red Lion Inn and Porches Inn (in Stockbridge and North Adams, Massachusetts), she is also vice chairman of The Fitzpatrick Companies, parent company of Country Curtains and Housatonic Curtain Company: a partner in Evviva (a women's apparel boutique); and owner of Fuchsia Inc., a designer and manufacturer of home furnishings made from recycled clothing.

Matthew Morrissey is the executive director of the New Bedford Economic Development Council.

Elizabeth Padjen FAIA is the editor of ArchitectureBoston.

Jason Schupbach is the creative-economy industry director for the Massachusetts Office of Business Development.

Beth Siegel is the president of Mt. Auburn Associates, an economic-development consulting firm in Cambridge, Massachusetts.

Anita Walker is the executive director of the Massachusetts Cultural Council.

Carole Walton is the manager of Create Boston, an economic-development initiative of the Boston Redevelopment Authority.



Elizabeth Padjen: I've come to think of the Creative Economy as the purloined economy - something that's been hidden in plain view. It's been with us for a long time but hasn't really been considered a cohesive economic sector until recently. As a result, there seems to be a lot of confusion about definitions — everyone seems to have a different opinion. There's the cultural-tourism piece, which has to some degree hijacked much of the public understanding of the Creative Economy in this state. There's the "applied art" definition — putting creativity and the arts to some functional purpose. That would include architects, landscape architects, graphic designers, product designers. But it also includes advertising, film, videogames, and media — the reach of this sector into all aspects of our lives is remarkable. And of course there is an enormous population of what might be called "embedded creatives" — the people who are tallied up as working in the financial or life-sciences sector, but are writers or designers on staff. What accounts for this confusion? What exactly is the Creative Economy?

Beth Siegel: The concept is relatively new. Even a decade ago, people tended to look at the importance of the arts and culture in an economy in terms of economic-impact studies - such as reports comparing the presence of cultural institutions to a sports stadium. In the late '90s, Mt. Auburn Associates was commissioned by The New England Council and New England Foundation for the Arts to look at the cultural economy of the entire region. We believed it was a sector that should be examined as an industry, just as we look at biotech or the software industries. Somehow that led to the terminology "creative economy." We defined the Creative Economy as having three elements: creative industries, a creative workforce, and creative communities. We started to look at industries in which creative content defines competitiveness much the same way people have defined technology industries broadly to include biotech and computers and software, because technology is the common competitive element of those industries.

The idea of innovation and creativity and entrepreneurship as a core part of the Massachusetts economy is not new. Michael Dukakis was promoting this back in the 1970s. What is new is that we're looking at a set of industries where the creative content is the defining element. That is where we get some blurriness in thinking about the word "creativity." But there's really no right or wrong definition.

Greater Boston is home to the secondlargest industrial-design community in the country. Largely invisible to the public, industrial designers (also known as product designers) are responsible for the design of mass-produced products from consumer goods to computers and high-tech equipment. Left: Zarafina Tea Maker, designed for Jarden. Design: Continuum; West Newton, Massachusetts. Photo by Sal Graceffa. Karl Baehr: The common element among all the various definitions of the Creative Economy is not only the presence of innovation but also the power of ideas. Our economy is getting lighter: we're going from steel to software; we're seeing physical GDP decrease; patent activity has increased 75 percent from 10 years ago. Innovation and the ability to monetize ideas are at the heart of just about all of these definitions.

Anita Walker: Something else that distinguishes this industry is that it embraces the nonprofit sector, which other industries typically do not. So our symphonies and our theaters are part of an industry that also includes a commercial or profit-making sector.

The common element among all the various definitions of the Creative Economy is not only the presence of innovation but also the power of ideas. Innovation and the ability to monetize ideas are at the heart of all of these definitions.

KARL BAEHR PhD

Elizabeth Padjen: My impression is that people initially thought of the Creative Economy as comprising only the nonprofits, the cultural institutions. The recent push has been to make them understand that there is also a for-profit component. Is that dichotomy still there?

Beth Siegel: When we began our work, we realized that the old divide between nonprofit and commercial really didn't make sense anymore. There are too many hybrids — such as museums running retail shops — and the sectors have merged. For example, we tend to think of the media industry as for-profit, but it includes National Geographic and NPR, which are nonprofits. The focus is the product, not whether it's delivered by a for-profit or nonprofit.

Karl Baehr: The business functions are essentially the same whether it's a for-profit or a nonprofit entity. Some of the mechanics and strategies are different, of course, but you still have to operate effectively.

Anita Walker: The nonprofits enthusiastically embraced this broader notion of the Creative Economy because they understood the value of being perceived as a significant part of the economy by state legislators and those who fund their work. Being seen as a real economic engine rather than just a nicety has made an enormous difference over the last several years.

Nancy Fitzpatrick: We've been lucky in the Berkshires to have a long tradition of art and culture. Everybody there has come to realize, especially over the last 40 or 50 years, that our nonprofit cultural organizations contribute incredibly to our economic vitality, and also to fostering the creative communities. But not everyone is aware of the role that the for-profit creative businesses

Main Streets with cultural institutions and artist live/work spaces have intrinsic value as vibrant places to live. But they also have an economic value in that they make a community that is attractive to talented people and, therefore, to employers — some of whom might not themselves be part of the Creative Economy.

ANITA WALKER

play. It's still really important to bring these two sectors together in people's minds. For years and years, state government has been geared toward a different kind of industry, and a lot of politicians and policy-makers still don't understand what the for-profit creative industry contributes. There's a lot of work to be done.

I've recently become aware of the importance of home-based businesses to the Creative Economy and the economy as a whole. My parents started a home-based business, Country Curtains [now a mail-order company with retail shops in 12 states]; I confess I had to be convinced that it is in fact part of the Creative Economy. The Creative Economy doesn't necessarily develop products only for the most sophisticated people. It also produces things that mainstream people feel comfortable with and love, things that are sold at a very affordable price. We really have to embrace everybody. Tattoo artists. Doily makers, Anybody who can make a living by doing something that is creative.

Jason Schupbach: We've seen a sea change in just the last year around the way this state addresses the Creative Economy. We already had one of the most advanced Creative Economy policies in the country supporting the nonprofit sector through the work of the Massachusetts Cultural Council. Now we are also developing a complementary policy around the for-profit creative industries, because they often do have different needs. That's what resulted in the creation of my job. I have counterparts in the Office of Business Development who focus on the manufacturing, life sciences, IT, clean energy, and defense industry sectors. By creating my job, Governor Patrick has said the creative-based businesses, such as entertainment — which includes film, TV, videogames, music, and publishing — design, digital media, and advertising businesses, are every bit as important to the state's economic growth as those other industries. We want to make sure that the for-profit creative industries are aware of the resources we have for them right now, and we want to understand what we should be doing in the future to develop these parts of the economy.

Beate Becker: I believe the more important debate is the question of creativity versus innovation, and why the Creative Economy is different from an Innovation Economy. I really want to stress that, when we're talking about the Creative Economy, the creativity is about creative content. For example, engineers are creative, but they're not producing creative content. Creative content is based in culture or the senses: song, drawing, theater. The economist Richard Florida has brought attention to the notion of a "creative class," but his class is so inclusive that he's talking more about a knowledge-based class. He includes accountants and lawyers, who

certainly use their minds, but are not necessarily creative workers. They're different from actors or graphic designers.

Elizabeth Padjen: Along with the idea of a creative class, we have to give credit to Richard Florida for popularizing the understanding that creativity has a physical component — that some places nurture creativity better than others.

Anita Walker: Our understanding of what we call "creative communities" is already expanding. Main Streets with cultural institutions and artist live/work spaces have intrinsic value as vibrant places to live. But they also have an economic value in that they make a community that is attractive to talented people and, therefore, to the companies who want to employ them, companies that will bring jobs and wealth to a community. And of course some of those companies might not themselves be part of the Creative Economy sector.

Elizabeth Padjen: Some cities have been quick to understand this. New Bedford, for example, has been getting great press in the last year as a community that is trying to develop its creative sector as a way of defining itself. Matt, what were the roots of that initiative?

Matthew Morrissey: About three years ago, we were pitching a foreign company that was considering New Bedford for a new manufacturing facility that would employ more than 600 people. We were on the short list and had developed a package of incentives that made us as competitive as any other place in the world, really. Halfway into the presentation, the site-location consultant stood up and said, "Wait a second. I get all of this, but I'm originally from Newton, and I can't imagine building a workforce in the city of New Bedford." We had it all, but we were saddled with an outdated perception of the city. And ultimately, we lost out.

So we had to do our homework. The mayor and I sat down and asked, What is it about that experience that encapsulates the challenge facing New Bedford? We don't sugarcoat the reality of a city like New Bedford, but we wanted to figure out how we as a city could use our assets to better tell our story. What came forward was the sense of place.

The idea of the Creative Economy works pretty naturally for New Bedford. For 10 years now, AHA! [Art, History & Architecture, a cultural organization] has been promoting the possibilities of New Bedford to the scores of people who come to its free Downtown Cultural Nights on a regular basis. And when people sense possibility, you inspire their imagination. It is a very important part of retaining folks who are more educated and more prone to civic engagement on their block, in their

neighborhood, and at other levels of government. If you can tell that story to a large enough population, eventually you hit a couple of investors, a couple of site locators, and CEOs.

The direct economic impact of businesses in this sector, however we define it, is real. We have 48,000 jobs and 2,300 businesses in the city, and about 10 percent of that can be attributed, in a broad sense, to the Creative Economy. The Creative Economy isn't going to become our largest employer. But we know that it can be an enormously important, if not *the* most important, inducer of job creation in the city of New Bedford.

Anita Walker: This has important implications for public policy: cities like New Bedford, Pittsfield, and Worcester — and, of course, Boston — have recognized that they want the Creative Economy to be part of their city plan and have named individuals who are part of city government to coordinate these efforts. They understand that it's about business development, but it's also about community development. You really need a holistic approach.

Nancy Fitzpatrick: Something that we're grappling with in the Berkshires is the fact that there is no leadership. In cities, you have a mayor who sets an agenda and pushes for it; you can go talk to this one person. But in the Berkshires, we have two cities and 31 towns, and the towns usually have volunteer leadership. There might be one overworked, underpaid town manager, aided by salt-of-theearth elected people who are doing their jobs for nothing. You have to try to raise their awareness about the assets that they often don't even know they have.

One of the additional challenges that the Berkshires faces is that there's so much traffic across the borders with Connecticut and New York, in terms of where people live and work, but also in terms of business relationships. We need to find resources that will support this reality. If, for example, we get a grant from the Massachusetts Cultural Council, we can't use it to support a Connecticut enterprise.

Beate Becker: That is an enormous challenge for New England in general; there are many cross-border opportunities. A maritime trail, for instance, doesn't stop at the Massachusetts borders. Nor do the clients or employees of a design firm. How do you find something effective that's more of an overlay, that crosses towns and states without political jurisdiction? And though we don't have a real answer for that, I think that Massachusetts has started to pursue an effective model, focusing on industries themselves as the overlay. The film industry, for example, cuts across jurisdictions, as does the design industry.



Massachusetts is actively promoting entertainment-based industries, which the state Office of Business Development defines as film, TV, digital media, videogames, music, and publishing. Local institutional resources, such as WGBH, WBUR, MIT Media Lab, Emerson College, Berklee College of Music, and Mass College of Art and Design — among many others — have fostered a creative community that is at the forefront of new entertainment media. Right: Arthur. Creator: Marc Brown Studios; West Tisbury, Massachusetts. Image courtesy WGBH.

Jason Schupbach: Some regional organizations are stepping into this role. Berkshire Creative is certainly one, and the Creative Economy Association of the North Shore has also emerged as a real leader.

Karl Baehr: I think New England has other challenges. I came to Boston from Santa Fe, which is one of only a handful of UNESCOdesignated Creative Cities. I sometimes think people here have to overcome feeling bad about monetizing their creativity. But there are also regional differences that parallel some of the differences Beate mentioned earlier between innovation and creativity. A famous example is Xerox Corporation, back in the beginnings of Silicon Valley in the '70s. Xerox hired a bunch of high-bohemian, high-tech kids from Berkeley and Stanford. These kids considered themselves artists. It was actually Xerox that invented the mouse, the scanner, the fax machine, the graphical user interface, all that stuff that we've attributed to Apple. But the reason Xerox didn't monetize it was completely cultural - a disconnect between West Coast high-bohemians and East Coast boardroom suits and ties. Xerox would never sell anything called a mouse.

But there's a corollary to the Xerox story: as we consider what a developed Creative Economy could mean, we should also include its influence on creative thinking in other sectors as well. Can you imagine what the MBTA [Massachusetts Bay Transportation Authority] would be like if we had a creative thinker in there anywhere? It would be a radically different organization.

When I listen to President Obama talk about green jobs and high-tech as a priority. I wonder why the Creative Economy isn't being mentioned in that same context.

CAROLE WALTON

Beate Becker: I recently visited Switzerland, which is pursuing some very exciting initiatives. The Swiss are actively bringing together schools of art and design with schools of technology, developing joint curricula and joint laboratories, with some extraordinary results. I'm really concerned that we're not doing enough of that here. Yes, there's the MIT Media Lab, but that's one little node. There's tremendous potential, particularly in the Boston area, for technology companies and design companies to do much more collaboration, both in classroom laboratory settings and in commercial settings.

Nancy Fitzpatrick: We need to take advantage of the naturally collaborative tendency of younger people: I see it in my own children and the people I work with. There are no barriers. There are no secrets. People aren't possessive about their ideas. They share openly. These young people have a new view, and I think it's going to have an enormous, positive influence.

Carole Walton: We can try to support that tendency by providing

programs, places, resources — whatever it takes — to encourage cross-pollination. The BRA [Boston Redevelopment Authority] is currently exploring the development of an incubator building for people working in the creative sector.

Jason Schupbach: Metro Boston has the advantage of having so many creative people in a relatively small area. We're seeing a lot of "bump" or "spark" events that get all the creative people in a room to see what happens. Real collaborations and business deals are coming out of these meetings.

Elizabeth Padjen: One of the problems we often hear is that the creative people tend not to be joiners. Or they join organizations that were conceived of years ago that don't recognize the sorts of blurry borders we are discussing here. If we have architects who are also doing textile design and Web design and God knows what else, there's no God-Knows-What-Else Association for them.

Beate Becker: DIGMA [Design Industry Group of Massachusetts] addresses exactly that problem. It's an association that's been heavily supported by the state, with seed funding from the Massachusetts Cultural Council, the Massachusetts Technology Collaborative, and the Boston Foundation — a significant investment in what they see as an emerging design cluster. DIGMA's goal is to bring creative people together to create a common identity and voice, people who are unified by the fact they are all designers despite their individual skills and expertise.

Jason Schupbach: DIGMA is especially valuable because of the exposure it provides for the industry. Most people have no idea of the size or range of the design industry in Massachusetts or how many companies are right here doing amazing work. How many people know that Greater Boston is home to the second-largest product-design community in the country? Look at a firm like Continuum, which is based in West Newton, Massachusetts, with offices in Seoul, Milan, and Los Angeles. They have a billion-dollar product-design wall, with three or four products they designed that have made a billion dollars each.

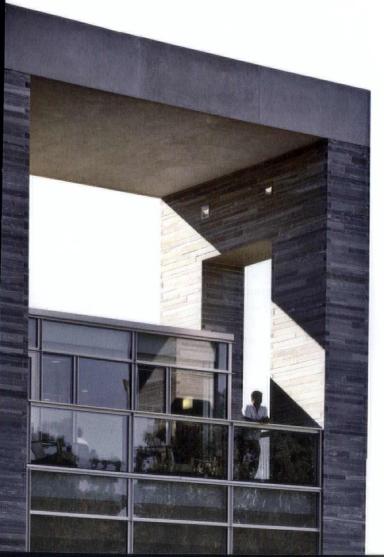
Beate Becker: Visibility is a very important thing. Here's one simple thing that could be done by the state: Terminal E at Logan Airport, the international terminal, is featuring an exhibition called "Science Swiss." It consists of 25 panels of beautiful photographs and stories of scientists in Switzerland doing incredible work - everything from entomology to geology to genome projects. I walked down there and thought, Wow, this is beautiful graphic design, beautiful photography, beautifully written. All sorts of creative skills employed in the presentation of the stories of these scientists. And I said to myself, Why are the Swiss advertising in Boston's Logan Airport? Why isn't Massachusetts advertising Massachusetts creativity and industries in Massachusetts airports? We can make better use of existing resources to promote our Creative Economy.

Matthew Morrissey: There is another kind of visibility that also has enormous value, which comes through the film industry. There's the promotional aspect, of course — tourists see Boston in a movie

and want to visit. But just as important is the promotional aspect for the residents. New Bedford has had 15 shoots in the last 24 monthsall of them small, for indies and cable. But the value for us isn't so much in the money spent by the crews. It's in the impossible-tomeasure pride the whole community feels when someone says you're valuable enough to film. When you're dealing with Gateway Cities that have been in a virtual depression for 50 years, you can't overestimate the energy that is created. Film provides a validation you're cool! — that in itself promotes the Creative Economy.

Carole Walton: One of the things that we've done with the Create Boston program is to identify the creative industries in Boston that show significant growth potential. For the last three years, I've been

The metropolitan Boston region is home to the largest concentration of architects in the country, many of whom design buildings around the country and the world. Local architects are especially known for expertise in institutional, educational, healthcare, research, preservation, and planning projects. Below: Alice Paul & David Kemp Residence Halls, Swarthmore College, Swarthmore, Pennsylvania. Architect: William Rawn Associates; Boston, Massachusetts (recently named top firm in the country by Architect magazine). Photo by Robert Benson.



focusing on the videogame industry, increasing awareness of Boston as a digital-media hub and laying the foundation for its continued growth. People are now viewing Boston as a videogame hub; there are currently about 76 companies located in and around Boston. We created the first game-industry steering committee, pulling in video companies from around the state, and convened focus groups to learn more about the challenges facing the industry. They told us that they needed a way to better communicate with each other and asked if we could develop a website. We applied for and received a grant from MCC to do just that [www.poweringupboston.com].

When I listen to President Obama talk about green jobs and high-tech as a priority, I wonder why the Creative Economy isn't being mentioned in that same context. A lot of it has to do with us not marketing ourselves properly, as an industry and as a place. Boston needs to re-brand itself as the fabulous, creative epicenter that we truly are.

Karl Baehr: If Boston's really going to be a creative city, we've got to understand what's important to these people who aren't joiners. As a city, we need to be creative comprehensively. Not just in terms of infrastructure like roads and WiFi. We need to be creative with bureaucracy. We need to create an environment that we can market. Boston is one of the greatest cities for entrepreneurship in the country. The creative minds are here, but they leave. Why is that? Because we have yet to create this genuine creative environment that these folks are looking for. They're looking for stimulation. They're looking for individuality. They're looking for openness. They're looking for something beyond a job, something beyond even a career. It's cultural.

Jason Schupbach: I would like to debunk the myth, though, that all creative people are outsiders. I think that's almost completely false. If anything, they're very interested in being part of a community of people who have similar interests. One reason why international companies are starting videogame companies here in Massachusetts is because we have the fourth largest gaming community here, and they want to be part of that community and connect with the talent that's already here. It's a highly networked community where everybody knows each other. That is what people are really looking for when they're looking to be part of a creative industry.

Carole Walton: It's important to remember that the whole gameindustry influx here was not organic. It was part of a definite strategic plan. All of a sudden Boston is seen as the premier location for videogame events, but that didn't just happen overnight.

Elizabeth Padjen: What do people who are starting Creative Economy businesses want most? What do they ask for?

Carole Walton: They're looking for affordable space. They're looking for funding. They're looking for an opportunity to be with other folks in creative industries who think the same way they do.

Jason Schupbach: The BRA has been really innovative on that front - it's one of the few entities in the country that actually started a fund specifically to support Creative Economy businesses.

The connection between affordable, interesting space and the Creative Economy shouldn't be overlooked. One linkage that would create enormous opportunity would be to lift the current \$50-million limit on the historic-preservation tax credit.

MATTHEW MORRISSEY



Massachusetts is considered a hub of footwear design. Brands with local presence include Reebok, New Balance. Puma, Clark, Stride Rite, and Saucony as well as many smaller companies. The footwear industry employs many in-house designers, as well as independent product designers and footwear design consultants, who often also design for well-known fashion labels. Above: Puma Hawaii XT. Design: Puma; Westford, Massachusetts. Photo courtesy Puma.

Carole Walton: We also have Marine Industrial Park, which is owned by the BRA, and right now we're creating a cluster of creative businesses there. So we can give them space at an affordable price and get them all together in that environment.

Matthew Morrissey: The connection between affordable, interesting space and the Creative Economy shouldn't be overlooked. One thing that the current state administration does very well is to understand linkages, and one linkage that would create enormous opportunity for the Creative Economy in cities outside Boston such as New Bedford would be to lift the current \$50million limit on the historic-preservation tax credit. When you look at the seven states that have uncapped historic-preservation tax credits, you see an enormous spike in investment capital. When you dig deeper, you discover that the Creative Economy is fueling a huge part of the demand for space in historic buildings - businesses and nonprofit offices, residences for the people who work in them, and services for the residents and businesses. I think we would see similarly enormous spikes here in terms of redevelopment of old mill buildings. I'm working on a 300,000-square-foot mill project right now that would house a printing and digital-media firm, a high-tech firm, and artist live/work space. About 200 jobs, many of them in the Creative Economy, would be brought in or created as a result. But holding all three of those interests together over a period of two or three tranches of funding under the current historic tax credit program might be too hard. No one's fault - that's the system. But if the cap were lifted now, that building would be filled.

Elizabeth Padjen: Except for Gateway Cities like New Bedfordthe former mill cities of Massachusetts - this region is not known for affordable space or affordable housing. How can we be competitive relative to other regions of the country?

Beate Becker: If we're debunking myths, I want to debunk the one that people leave because of affordability. Where do all these creatives go? They go to New York and San Francisco, which are not exactly havens of affordable real estate.

If you ask people what they need and why they move, the answer is jobs. Work is the real issue. It's not just about educating creative people and getting them in a room together to generate a lot of ideas. If there is no market for those ideas, for those companies or products, then they can't continue. That's an issue that we're especially seeing now, with creative industries taking a big hit in this economy. If people aren't buying those services and those goods, it's a problem. So it's not just about growing the Creative Economy itself, it's about growing the demand for the Creative Economy.

You do that in part by developing awareness of the added

value that design can bring to an industry. Introduce designers to healthcare people and raise the issue of return on investment. What's the value of design to healthcare? Ask Apple the value of design, or Procter & Gamble. That billion-dollar wall at Continuum? Continuum developed the Swiffer for Procter & Gamble. Getting the other industries here — healthcare, financial, bioscience, high-tech — to employ creatives is what will keep people here. We've got the talent. We need the work.

Elizabeth Padjen: And in fact, if you look at the websites of many local product-design firms, in addition to what you might expect — household goods, electronic devices, consumer goods — you will find an astonishing number of sophisticated medical devices, which is no accident.

Beth Siegel: That's right. There are some fascinating crossovers, such as a company in the Berkshires that used to do computerized special effects for the movie industry that now employs 100 people doing medical simulations for the life-science industry.

Anita Walker: I also want to do a debunk. Every state worries about the brain drain. The fact of the matter is, young people move. One of the distinguishing features of the Creative Economy is that it's highly mobile. It's not agriculture, which is stuck in the ground; or fishing, which is stuck in the ocean; or oil wells, which are under the ground. You have to accept the mobility factor and work with it.

Nancy Fitzpatrick: I concur with Anita. I cringe every time I hear the president of Berkshire Community College say that we need to keep our young people in the Berkshires after they graduate, because I as an employer do not want to hire somebody to work at the front desk of Porches who's never been anywhere else, who can't get him- or herself down to New York and back. I think it's great that new people come and young people go; they might come back and they might not. Mobility is something that we need to learn to value; we don't necessarily want to keep people where they grew up. That's almost un-American.

Elizabeth Padjen: In this economy, a number of people are launching businesses on their own, but what do they really know about entrepreneurship? It may even be worse for creative people, who often seem to believe that being creative and being successful in business is oxymoronic. On the other hand, the Creative Economy seems to present an opportunity to create a different business model — to work in very fluid ways that are outside traditional corporate structures. Karl, your students come to Emerson because they have a love for some kind of creative endeavor. How do they respond to the idea of entrepreneurship? How can we encourage creative people to think about the opportunities that they have in the business world?

Karl Baehr: The fundamental problem is that rule number one of business — "it's business, not personal" — does not apply to an entrepreneur. It's very personal. It's not their business education that compels them to put their life savings into a business and work 15 hours a day, 12 days a week to make a go of it. What motivates them is the passion for an idea. And the moment that inherently

right-brained, artistic, emotional element enters into the equation is when an entrepreneur can get off track. So you have to do the reverse: artists can already envision the house that they want to build, but you have to teach them how to use a hammer and nail, and when it's appropriate to use a screwdriver, and what the pliers do. Those nuts and bolts — the law, management, learning how to network and partner, communication, finance — are all essential. Artist-entrepreneurs come to realize that, in order to make their vision become real, they need to learn these things, just as they need to learn how to use Pro Tools software if they're musicians or a paintbrush if they're illustrators. It's the same creative passion; it's just a different tool. And that makes it less foreign to our students. Our program is full, because our students realize that there is this thing called business out there that they need to understand.

This economy is a great time to be an entrepreneur, to be in charge of your own destiny. It's especially true of those who are part of the Creative Economy. What better way to make your way in the world than by doing what you love and creating something, whether it is software or art or music? And understanding enough about how to navigate the waters of business allows you to do that. "Brain lateralization" is the technical term: it's making the right brain work with the left brain, and learning how to shut off the right brain just long enough to say, Wait a minute, I'm injecting too much of my emotion into this; I need to think a little more critically. Because the passion can blind you.

Anita Walker: We can't disconnect the Creative Economy from K-12 education. If we relegate children to rote memorization and high-stakes testing, they're not going to be ready for the Creative Economy of the future. Increasingly we're seeing art and music squeezed out of the curriculum in favor of high-accountability subjects. These kids will need to be both critical and creative thinkers, to be comfortable with ambiguity and with tackling a problem that doesn't have a right answer and has never been solved before.

Jason Schupbach: Another important piece of the youth workforce-development picture is validation — helping parents understand that if their kids are interested in videogame development, for example, they can have a job in it someday. Sometimes people don't know that these are real and, in many instances, high-paying [jobs]. Economic-development folks can create the jobs but we need people to fill them. We have some empty jobs locally in the Creative Economy even now. We can't staff every firm that wants to come here.

Elizabeth Padjen: John Maeda, the new president of Rhode Island School of Design, said that one of his great challenges is dealing with the parents' reaction to a kid who wants to go to art school.

Beth Siegel: It would really fill a gap if all the art, music, communication, and design schools got together and asked, "How can we help people understand the occupational opportunities?"—and then took that show on the road to high schools. Because, I can tell you, high-school counselors are not telling these kids about the career potential of these creative disciplines.



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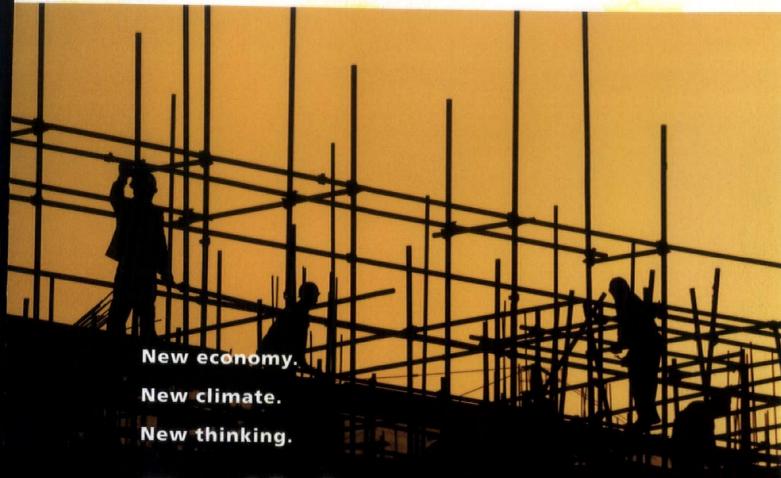
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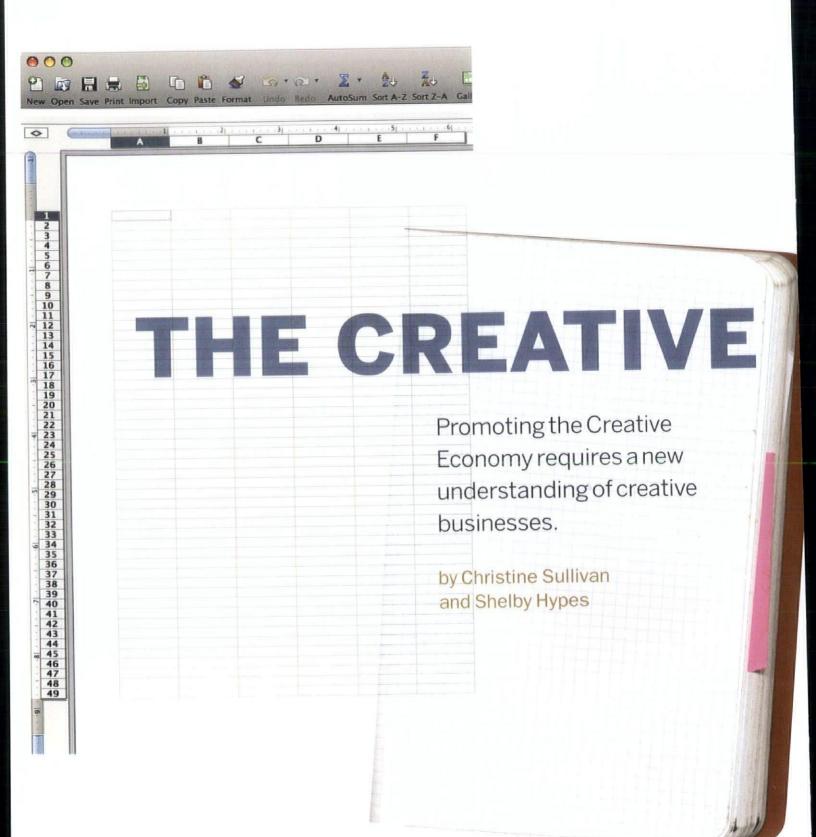


2009 keynote speakers pictured, left to right:

Robert A. Murray Chief economist and Vice President of Economic Affairs, McGraw-Hill Construction

Edward Mazria AIAArchitect and founder of Architecture 2030

Dean Kamen Inventor and founder of DEKA and FIRST



Seven misconceptions about the way we work

ENTREPRENEUR

What do a self-employed architect, a game designer, and a new-media consultant have in common? They're all part of the Creative Economy, they're likely to be proprietors, and they don't get the recognition they deserve. They're under-counted, underestimated and under-served — because they are the victims of serious misconceptions.

MISCONCEPTION #1: The Creative Economy is about the arts. Yes, actors, musicians, and visual artists are included, but it doesn't stop there. The Creative Economy consists of those industries that have their origin in individual creativity, skill, and talent, and that have a potential for wealth and job creation through the generation of ideas, products, or services. How this gets interpreted at a local level varies. In the Berkshires, for instance, tourism and the arts are indeed the backbone of the economy. But in another tourist destination, Essex County, the top Creative Economy clusters include design, research and development, and advertising. The key is in the name: creative. Jobs whose stocks in trade are creativity and innovation are likely to be part of the Creative Economy.

MISCONCEPTION #2: The Creative Economy centers on nonprofit organizations. In fact, according to a 2008 study of Boston's North Shore, the Creative Economy represents 10 to 12 percent of that region's private sector (non-government) employment, providing jobs for nearly 20,000 people through more than 2,000 enterprises. That's larger than the share of biotech (2 percent) and manufacturing (7 percent) industries within the metropolitan Boston economy.

It is when one combines the impact of the Creative Economy with that of self-employed proprietors and entrepreneurs that this overlooked yet powerful economic engine really picks up steam. In 2006 (the most recent year for which data are available),

proprietors represented one out of five jobs in Massachusetts. These are the sole practitioners, husband-and-wife teams, and micro-businesses that are part of our daily business lives. While exact numbers of proprietors among design professionals are not available, one statistic suggests that proprietors are a significant presence in the practice of architecture: among the members of the Boston Society of Architects, there are 475 sole practitioners and 200 firms of two or more employees.

Proprietors are flying below the radar for a number of reasons. They may have an Internet business or a home-based enterprise with no physical visibility, especially in towns where the prohibition on home-based businesses has never been changed. They may not have filed a DBA, so that their town or city does not know they exist. Their customer base may not be local, so they have little incentive to join a chamber of commerce or other community business group. And they have few advocates to speak for them.

MISCONCEPTION #3: If proprietors were important, they'd get more attention in state economic reports.

The truth is that, astonishingly, we're not counting proprietors (who account for one in every five jobs in Massachusetts, remember) at all in state economic reports. That's because proprietor data are filed only with the individual's federal tax return each year. When proprietors *are* considered, the doom-and-gloom story of statewide job losses becomes one that actually offers hope in grim economic times. The number of proprietors in Massachusetts grew 33 percent between 2001 and 2006, an average of more than 35,000 a year. That number was large enough to counter the loss of wage-and-salary jobs and result not in the 2.6 percent decrease in the number of jobs reported in the media for that period, but a 2.3 percent increase!

Although data beyond 2006 are not yet available, it is more

Becoming a proprietor and joining the Creative Economy is not only an increasingly viable employment option for individuals, but also a source of economic growth for Massachusetts.

than likely that both the number of proprietors and the growth rate of proprietors in many industry sectors are increasing during the current recession. It is during recessions that many laid-off wage-and-salary employees test the waters of entrepreneurship, some out of necessity, some taking advantage of their unemployment to realize a long-held dream.

MISCONCEPTION #4: Proprietorships, especially those in the Creative Economy, are not "real" businesses.

According to the recently released study Proprietor Employment Trends in Massachusetts: 2001 to 2006, which was also the source of the one-in-five statistic above, proprietors who work alone outnumber those with wage-and-salary employees. This is not to dismiss proprietors with employees; they grew by nearly 28 percent between 2001 and 2006. (The full report is available online at www.ceans.org.) These are not necessarily one-person, kitchentable hobby operations. They are small companies who choose not to incorporate for a variety of reasons, frequently taxes. Among them may well be the next killer iPhone application, the next Design Within Reach, or the next Sundance award-winner. More important, not to consider creative entrepreneurs as having real businesses is to buy into a misconception with significant consequences for how local, state, and federal governments allocate resources.

MISCONCEPTION #5: Most proprietors are people temporarily freelancing until they can get a real job.

Those who believe this are missing a dramatic and permanent shift in how we work. There are several factors driving this, the most compelling of which is the Internet. With a desk and a laptop, an individual can now run a global business from home. This could never have happened 20 years ago. Computing power and Internet accessibility have created a "portable economy." When the restrictions of physical locale are removed, entrepreneurs can collaborate with many more people, extend their customer reach, and draw on a far broader base of resources.

They can also work in new patterns. Tina Brown, the former editor of Vanity Fair and founder of The Daily Beast website, refers to the "gig economy" as one in which people don't hold a single job, but take on assignments or gigs, much as a musician does. Somewhat related to this, the self-employed are increasingly adopting the Hollywood model used in filmmaking - people with the specific skills and talents needed for a project come together for that assignment and then disband.

MISCONCEPTION #6: People in the Creative Economy are, well, "different." In some ways, they may well be. But even if they don't want to be grouped with the "suits" of the business world, artists, designers, and advertising copywriters have a lot in

common with their peers in traditional corporate environments: they need business skills and they need political support for their business endeavors.

Because the Creative Economy and proprietors are underreported and underestimated, it's not surprising to find that they're also under-served. Little research has been done to identify the economic impact of these companies, and no research has been conducted to identify their needs. But, as the director of the Enterprise Center at Salem State College, working with entrepreneurs and small businesses, I have a unique vantage point. I see talented people daily who are seeking skills they need to run their business. I hear them talk about the premium they, as individuals, must pay for healthcare, the limited options they have for retirement savings, their need for tax relief and for better access to credit.

MISCONCEPTION #7: There's little you can do. There's a lot you can do, and it may start by recognizing that you yourself, or the businesses you work with, are part of the Creative Economy. Creative entrepreneurs can form coalitions and associations to advance and support legislation and policy changes that will support their endeavors. Through organizations such as the Creative Economy Association of the North Shore, you can individually and collectively raise awareness of the Creative Economy's contributions as a sector and of the need to nurture the micro-businesses that contribute to the industry's vitality. These kinds of businesses have historically received little recognition at the government level.

The growth of the Creative Economy and the increase in proprietor employment in Massachusetts are phenomena not to be taken lightly in their own right. In combination, they tell us we're looking not at a transitory fad, but at a permanent sea change in how we work. Technology has empowered the creative entrepreneur and opened the floodgates to new opportunities for self-employment. Becoming a proprietor and joining the Creative Economy is not only an increasingly viable employment option for individuals, but also a source of economic growth for Massachusetts.

There is a new recognition of this within the Commonwealth. Massachusetts recently established the Creative Economy Council, chaired by the Secretary of Economic Development, and is the first state in the country to have a Creative Economy Director. The Massachusetts Cultural Council has also been very active in the promotion of this business sector. But the ultimate success of the creative industries in this state depends upon the energy of individuals. We need more voices in the choir. Join in, and help get the word out.

Christine Sullivan is the director of the Enterprise Center at Salem State College, the state's preeminent provider of services and support for small businesses. She is also a co-founder of the Creative Economy Association of the North Shore and was instrumental in the establishment of the state Creative Economy Council, of which she is a member.

Shelby Hypes is the principal of Scarlet Letters in Salem, Massachusetts and a board member of the Creative Economy Association of the North Shore.

HOW TO HANG A SHINGLE

Whether by need or by choice, this economy is prompting designers to go out on their own. How do they find what they need to know? And how can struggling small firms and solo practitioners get smarter about business?

BASIC BUSINESS

The US Small Business Administration

www.sba.gov Lots of great info, in a userfriendly format. This is the basic how-to business course that design schools left out.

The Association of Small Business Development Centers

www.asbdc-us.org
Helping entrepreneurs "realize
their dream of business
ownership." Resources and
free one-on-one (!) business
counseling across the
United States, including
Massachusetts (see below).

Massachusetts Small Business Development Center Network

www.sbdc.umb.edu
The local office of the ASBDC.
Bear with the website — it's
extremely useful with FAQ,
business guides, and forms all
in one place.

Center for Women & Enterprise

www.cweboston.org
The nonprofit CWE is "dedicated
to helping women start and grow
their own businesses." It offers
extensive workshops; note that
scholarships are available. The
Resources tab features a robust
menu of information for those of
either gender.

Enterprise Center at Salem State

www.enterprisectr.org
Unlike typical B-school programs,
the Enterprise Center focuses
exclusively on small business,
helping from startup onward. You
don't even have to go to Salem
to access the online workshops.

CREATIVE INDUSTRY SUPPORT

Massachusetts Office of Business Development

www.mass.gov/mobd
On this easily navigable website, visit the Business Resource
Team, and the "creative industries" specialist. Don't be put off because this is a state program; the staff is committed to working with individuals, including answering your e-mail.
Jason Schupbach is the
Creative Economy industry director: 617-788-3602;
Creative.Economy@state.ma.us.

Design Industry Group of Massachusetts

www.digma.us
DIGMA is a new organization
promoting the state's design
economy. If you design buildings,
landscapes, products, graphics,
furniture, fashion — anything—
you have a new friend.
Beate Becker is the director:
781-789-8919;
director@digma.us.

Massachusetts Cultural Council

www.massculturalcouncil.org
The MCC state agency promotes
the arts and humanities and
supports nonprofit cultural
organizations across the state.
It's known as a grantmaker and
a good clearinghouse; check
out the Services and Partners
resources.

REGIONAL RESOURCES

Create Boston

www.createboston.com
The Boston Redevelopment
Authority's "Create Boston"
initiative helps creative
businesses secure financing,
find real estate, navigate city
agencies, and more.
Carole Walton is the manager:
617-918-4259; carole.walton.
bra@cityofboston.gov.

Berkshire Creative

www.berkshirecreative.org
Resources include legal clinics,
intellectual property talks, job
listings, networking events —
for new solo practitioners as
well as bigger, established
organizations. Helena Fruscio
is the director: 413-822-8324;
helena.fruscio@
berkshirecreative.org.

Creative Economy Association of the North Shore

www.ceans.org
CEANS promotes the Creative
Economy and fosters networking
and collaboration among
creative businesses. The Jobs
and Talent board is like
Craigslist — but better.
Jennifer Toomey is the director:
978-542-7528;
jtoomey@enterprisectr.org.

The committees of the Boston Society of Architects are a

terrific resource and open to non-members, too. The Residential Design Committee and Small Practices Network each address issues that those just starting out may find interesting. Meeting topics change monthly, and vary from discussions of insurance or hiring staff to technical workshops and the changing building code. Find them, and others, under "Committees" at www.architects.org.

Build Boston and Residential Design and Construction

www.buildboston.com
These Boston Society of
Architects events include dozens
of workshops on how to run a
small design firm.

WORK OPPORTUNITIES

The Central Register

www.sec.state.ma.us/spr/ sprcentral/infocent.htm This is a weekly listing of large and small public-work projects being put out to bid for design or construction in the Commonwealth. It's available electronically by subscription, and in print free through most public libraries.

The UrbanArts Institute

www.massart.edu/x470.xml UrbanArts maintains a free database of over 2,000 artists, especially those who work on public art projects; included artists receive a weekly listing of public-art opportunities. Christina Lanzl is the project manager: 617-879-7973; christina.lanzl@massart.edu.

Design Opportunities

www.nbnservice.com
The National Building News
Service offers a free quarterly
preview listing of upcoming
projects by major corporations,
educational institutions, and
healthcare facilities for which
designers have not yet been
selected.

PRACTICE TOOLS

The Architect's Essentials series of books from Wiley includes titles on starting a firm, negotiation, marketing, and proposals.

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Compiled by Gretchen Schneider AIA

Cities, regions, even entire nations, are pursuing the Creative Economy. What can we learn from Singapore, Glasgow, and Ogulin?

by Tom Borrup

Compare / Contrast



Glasgow is internationally recognized for the success of its strategic focus on the arts and culture to revive a declining post-industrial economy. Since its designation as European City of Culture in 1990, the city's promotion of arts programs and investments in cultural institutions have built upon its historical and educational assets to transform the Glasgow "brand." Designated the UK City of Architecture and Design in 1999 and the **UNESCO** City of Music in 2008, Glasgow today enjoys a healthy, diverse economy. The city's marketing office reports that Glasgow has been called the UK's "hippest and most happening city" by Travel & Leisure magazine and "one of the top three business centers in Europe" by Fortune. Photo by Robert Pool.

Successful economies have always been creative. Why is this 21st-century Creative Economy any different? Global exchanges and the clashing and blending of cultures have been documented and analyzed for at least 10,000 years. Technological innovations affecting all of society resulting from aesthetic curiosity (or "art for art's sake") can be traced back at least as long. Likewise, cultural tourism — people traveling to learn and explore, as well as to trade and exchange ideas — isn't new either. Nor was Richard Florida, the economist who popularized the idea of the "creative class," the first to notice that economic prosperity and concentrations of creative people go together.

So what makes this era so special?

In a word, speed. We communicate across the globe at the speed of light. We, and our goods, move across thousands of miles overnight. Global cultures blend daily in the workplace, on the streets, and at the farmers market. Artists and inventors blog, create, and reinterpret in virtual and physical space 24/7. Innovation — the fuel for entrepreneurs — and the drive to find and experience the new have been with us since the dawn of civilization. Now, they are in our faces, at our fingertips, and changing before our eyes like never before.

"New ideas must use old buildings," wrote Jane Jacobs. However, the Creative Economy requires more than old buildings, artists, bohemian neighborhoods, and tourists. Cities, urban regions, and small towns looking for sustainable creative economies in a global marketplace must also look at their social and community fabric — things that do not change overnight. They need to examine their: clarity and authenticity of place ("brand identity"); civic and corporate cultures and institutions; ability to adapt to constant change; capacity to welcome and integrate new and different people and ideas; and ability to cross boundaries and find synergies between industries and disciplines.

Contrary to many notions and fears around globalization, success is not found in homogenization. Cities and regions that are able to distinguish their brand and build on unique skills, products, services, natural resources, and other assets are more likely to succeed. Creative branding or identity development is increasingly critical for *places* as much as it has become for *products*. More than a PR campaign, good branding requires finding widely shared authenticity rooted in the history, people, and evolving story of place.

The Croatian community of Ogulin with its castles, magical landscapes, and local literary figures reasserted its **brand based in history and authenticity**. Renowned for the fairy tales that were written there, the community has become a cultural tourism destination and has reignited its intellectual and creative energies, thus reinvigorating its self-esteem and its fortunes. In contrast, Hamilton, New Zealand, ignoring its indigenous heritage and agricultural roots, is trying to re-brand itself with the slogan "From Cowtown to Wowtown." A likely flash in the pan.

Healthy civic and corporate cultures make an enormous difference. Chicago is a city that works — even if its political capital is tightly held. A diverse economy and inclusive civic institutions have kept it growing and stable. Similarly, visionary and effective leadership is credited with reviving the UK's Newcastle Gateshead area, inspiring citizens, attracting

investment, and assembling successful Creative Economy elements. On the flip side, rife with corruption and the inability of their leaders to fully motivate and engage people, are the cities of New Orleans; Bridgeport, Connecticut; and Camden, New Jersey — which only look good next to Cartagena, Baghdad, or Nairobi.

Over the past couple of decades, the Scottish city of Glasgow has transformed itself with new industries and trade partners for at least the fourth time in its history. Meanwhile, Detroit and Flint, Michigan struggle massively to **adapt to changing conditions**. These US cities were literally built around an industry cluster, markets, technologies, and labor strategies whose relevance has waned.

While still a young metropolitan region, Silicon Valley and its urban center, San José, demonstrate enormous capacity to integrate new ideas and people through a cluster of industries that have morphed a couple of times in as many decades. The business and social construct of the "wiki" emerged there not only as a functional tool to incorporate the best ideas quickly from across the globe, but also as a way of re-thinking how business is organized. Welcoming people and cultures from around the world, San José also exhibits one of the highest rates of minority business ownership among major American cities and has perhaps the most diverse mix of small and mediumsized nonprofit arts and culture organizations. Meanwhile, in Copenhagen, Creative Economy proponents lament the resistance to newcomers among the native-born and see evidence that xenophobic attitudes have clogged the city's economic development pipeline.

Creating synergy across disciplines and sectors can be seen in some of the most productive small and large places. Legendary college president and Tennessee Valley Authority architect Arthur Morgan wrote about his small Ohio college town of Yellow Springs in 1953. In addition to one of the most concentrated and active small arts communities in the US, this village of 3,500 spawned businesses producing innovations in aluminum casting, seed hybridization, industrial design, and high-precision thermostats as well as water-monitoring devices, industrial surface-plates, high-stress rubber bearings, and the first-known EMT training program. The remarkable list goes on. Morgan concluded these industries sprouted from a quality of life that included interdisciplinary education in which both art and science were central, inclusive racial and labor relations, and a highly engaged civic community. Morgan was perhaps the Industrial Age's Richard Florida. By contrast, and on a wildly different scale, Charlotte's massive banking industry leaves that city in a precarious position in what is essentially a one-industry town.

A report published in February 2009 by the UK's National Endowment for Science, Technology and the Arts predicted that the creative sector in that country will grow at an average annual rate of 4 percent during the next five years — more than twice the rate of the economy as a whole. It will employ more people than the financial sector by 2013, or as much as 7 percent of the workforce. (Similar data have not been studied for the US.)

Too many US communities hoping to tap this growing sector have fallen for easy solutions. City after city has rushed into a simplified version of Richard Florida's three Ts, trying to attract Talent and Technology and showing little understanding of Tolerance. But clusters of "creative class" workers and the industries they populate are not enough.

This temptation to oversimplify, and thus misunderstand, the Creative Economy is common. In many US cities, institutional arts interests have dressed up the Creative Economy as a way to garner more money for the arts. A healthy creative community is a necessary ingredient for a healthy economy — as are healthy civic and corporate cultures. However, big symphonies, operas, ballets, and museums full of Renaissance paintings do not necessarily encourage creative behaviors among residents who come from all parts of the world, nor do they excite most young high-tech workers.

Similarly, cultural tourism alone is unlikely to transform an economy - apart from Orlando, Florida, a place dependent on a couple of California-based corporations. While their theme parks are unlikely to go anywhere in the foreseeable future, if and when they do, the region will need more than Ghostbusters.

Looking for quick fixes, some cities have tried to re-package creative industries, promoting "creative clusters." Others have fashioned or built bohemian enclaves or arts districts to attract young hipsters. Clusters may fuel a raging engine for the short term, but cities that have focused on one product have not fared well over time. Their precipitous declines have been as dramatic as their rising fortunes. Clusters can be significant parts of an economic mix if they operate in a creative and permeable environment and interact vigorously with other industries and sectors.

Still other cities have put all three together — a robust arts community, a "cool city" image, and a cluster of creativitybased businesses. In some places, this has made a difference. A community with healthy self-esteem, where people get along and work together to accomplish civic ends - a community that can pull off this three-part strategy — already has in place most of the needed ingredients and is on the right path.

But an even more sophisticated understanding of the mechanisms that drive creative economies requires an even broader, more holistic view. Two countries, with very different histories and cultures, have recently embarked on initiatives that merit attention. Seeing the need to maintain a balance between strategies and assets, both Sweden and Singapore have articulated plans for nurturing their creative industries. In a nation not well-known for tolerance, Singapore's National Arts Council prescribes the "5-C" plan to heighten the creativity of this already prosperous nation. Culture, Competency, Connectivity, Capital, and Conditions provide the framework it hopes will ensure a perpetual place atop the economic food chain. A program laid out by Sweden's Knowledge Foundation has many parallels: Education and training, Research, Industry, Business collaboration, and Arts/Culture. This "ERIBA Model" is based on a circular approach of stimulating creativity and the arts, providing the forums, cross-sector research, and collaborative systems that allow business and industry to gain from innovations and innovative behaviors. Both Singapore and Sweden are

Cities and regions looking for sustainable creative economies in a global marketplace must also look at their social and community fabric things that do not change overnight.

thinking in terms of larger systems that embrace all their assets.

This is the challenge that faces Massachusetts today as it considers its Creative Economy. While Boston has reinvented its economy several times by drawing upon its key assets of geographic location and intellectual capital, it has also lost out on opportunities because of its tightly held culture, as AnnaLee Saxenian demonstrated in her 1994 book Regional Advantage: Culture and Competition in Silicon Valley and Route 128. Boston's 19th-century business models, rigid proprietary practices, and paternalistic corporate culture, she argued, did not provide fertile ground for invention, risk-taking, and entrepreneurial enterprises. Meanwhile, a very different and open environment took off in Silicon Valley.

But the Boston region, indeed the entire state, is today a very different place from what it was in 1994. The economic growth of the last 15 years has coincided with the expansion of entire industries - biotechnology, videogames, new media that did not exist a few decades ago, that have brought with them fresh faces and fresh business practices. The corporations that once ruled Boston are largely gone — sold or relocated. Demographics have changed, with a larger immigrant population. Greater Boston is not Silicon Valley, but it is not what it once was, either. It is much better poised to do the necessary work — to examine and promote its identity, functional capacity, adaptability, inclusiveness, and synergies and to invent the necessary means. After all, what's a Creative Economy without creativity?

Tom Borrup is the principal of Creative Community Builders in Minneapolis. The former executive director of Intermedia Arts in Minneapolis, he is the author of The Creative Community Builder's Handbook and is a faculty member at the UMass Amherst Arts Extension Service.

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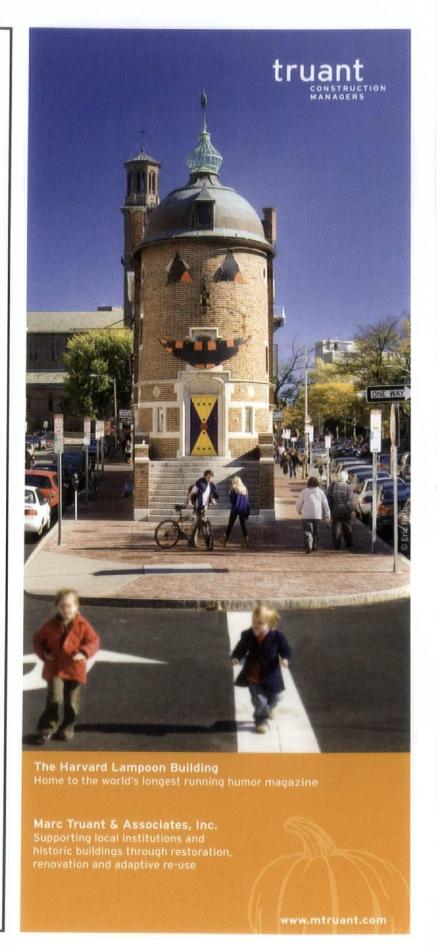
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Arts & Minds

Profiles in the Creative Economy

by Deborah Weisgall

I spoke to four people who solve old problems with new methods, who discover old solutions to new problems. They are combining interests and information in innovative ways. In doing so, they are building new communities. None of this work happens in solitude. It all requires a critical mass of resources: intellectual, technical, economic, and artistic.

While the reach of these enterprises is international, they are rooted in local communities that encourage cross-fertilization between different kinds of expertise, that find new paths for knowledge and intuition. Art and commerce are once again becoming more comfortable with each other. In this new atmosphere we are seeing the results of a convergence of these two basic human impulses. It is a whole new world.

Breakthrough technologies in textiles achieved by replicating techniques developed in Elizabethan England.



Academic insights made available to a wide audience.



The painstaking work of artisans informed by sophisticated design and local resources.



LCD screens opening into imagined worlds.



Deborah Weisgall writes about the arts for *The New York Times* and other publications. She is the author of *The World Before Her* (Houghton Mifflin, 2008).

Tricia Wilson Nguy

principal of Fabric Works, Thistle Threads, and Redefined, Inc.

Tricia Wilson Nguyen combines an undergraduate interest in anthropology and archaeology, an undergraduate degree and doctorate in materials science and engineering — work on for needlework and a knowledge of historical embroidery. She operates three companies simultaneously: Fabric Works is an engineering consulting company focusing on product design; she has designed textiles for use by the military, and this year collaborated with Polartec to launch a heated jacket. Redefined, Inc. uses current technology to manufacture "sewing cards," Victorian perforated papers used for crossstitch designs, which became too expensive to produce at the end of the 19th century. In her capacity as the founder of Thistle Threads, she designs reproduction threads and teaches historical embroidery techniques. She has served as a textile consultant to the Metropolitan Museum in New York and is currently working with Plimoth Plantation.



Deborah Weisgall: You seem to combine your interests seamlessly, as it were: your scientific background, your interest in handwork, your historical knowledge. Expertise in one field flows into the other. How did this come about?

Tricia Wilson Nguyen: My lives converged when I was asked to solve a problem of integrating situational awareness systems, which combine GPS, location of squad members, information about terrain, and physiological monitors into an electronic map, a "heads-up display" that can enhance a soldier's ability to negotiate the surroundings, possibly using the field of electronic textiles. The natural solution was to route the cables through the fabrics they wore, instead of using plastic cables, which would be snag hazards. This is when I discovered the work going on in the

not-yet-named field of electronic textiles. It was a natural for me, as I had optics, materials, systems, and high-tech textile experience. It was my knowledge of Victorian-era millinery that gave us the idea of making textile-based USB cables in a ribbon format; this led to my first manufacturing partners.

Because electronic textiles fuses two very disparate fields, everyone involved was at some disadvantage. As both an engineer and embroiderer, I could understand both technology bases. The engineers respected my ability to thread a needle, and people involved with the textile world trusted me because I could speak their language. I was stunned that when we met with the Army, my colleague would bring up my historic embroidery business as a technical qualification.

And my technological edge has allowed me to distinguish my historical research because few art historians would approach the problems in the way an engineer would. I can sometimes clear my head and look at objects from the standpoint of "how and who" because I have both hands-on experience and the technological means to translate that experience into a new analytical technique.

In product development, you look for short-run manufacturing facilities that can make complex metal threads; I do the same thing — work with artisan manufacturers — in the historic threads area. Often the technique or calculations I do for one area can be immediately translated to the other. It's important to understand product design and the economics of manufacturing. In the historic embroidery or restoration fields, the people who need new threads usually aren't prepared to help the manufacturer develop a market that can justify the effort involved in making such a thread. I have founded several outlets for that kind of development, though, so I can help engineer the product and market it for hobbyists. Then I turn around and introduce some of them to the e-textiles field.

Deborah Weisgall: You proceed from the premise that art and science and commerce can coexist and reinforce each other.

Tricia Wilson Nguyen: I've realized that to make true progress when you don't have a great number of resources at your disposal, you have to make art, science, and business coexist. I don't see them as antithetical to each other. Let me give you an example: When I have to grapple with the problems of scaling-up and capitalizing a new thread, I start thinking about the inventory costs associated with the range of materials that go into making that thread. Weeks later, I see a piece of complex historic embroidery with as many as eight variants of complex composite threads — threads we have trouble making today — in about 10 color combinations each. Now, historians attribute this embroidery to 12-year-old girls. Knowing that these threads were made of expensive components,



I start thinking about a 17th-century mercer [dealer in textiles] and his need to turn over inventory by selling to 12-year-old girls. Something just doesn't jive. I think, maybe it wasn't a girl, but a professional. Then I think about manufacturing on demand, and whether a small number of raw materials could be turned into such a large variety by using the spinning-wheel technologies they had available to them. Then I wonder again if we could use such techniques today to reduce the need for a range of reproduction materials by teaching hobbyists to make their own variants from simple components. And that leads me to make short runs of e-textiles threads to try out concepts for antennas in a cost-efficient manner. So commerce educates history, which, in turn, educates technology development. It's synergistic, and usually it revolves around the reality of current and past economics.

Deborah Weisgall: How important to the success of your enterprises is the community in which you live — not so much the neighborhood, but the intellectual community?

Tricia Wilson Nguyen: I couldn't be doing what I am doing if I didn't live in such an entrepreneurial high-tech area that is also at a nexus of textile history. Many of my clients or producers are remnants of the textile industry in Massachusetts. Living close to them allows me to raise a family while keeping my engineering skills sharp. Also, the two most important collections in the US of the type of embroidery I research are within three hours of home, and England is only an airplane ride away. I often double-up on business trips; I see a historic collection and research primary sources at libraries when I travel to teach embroidery or visit clients and manufacturing partners.

When my husband and I were deciding where to live — we have the dual PhD problem — there were only five places

I've realized that to make true progress when you don't have a great number of resources at your disposal, you have to make art, science, and business coexist.

that could support our fields. We chose Boston because we'd both gone to MIT. This fall, I'm guest lecturing at the Media Lab there — talking about 17th-century embroidery to an engineering group. I couldn't do that type of cross-disciplinary work in most cities.

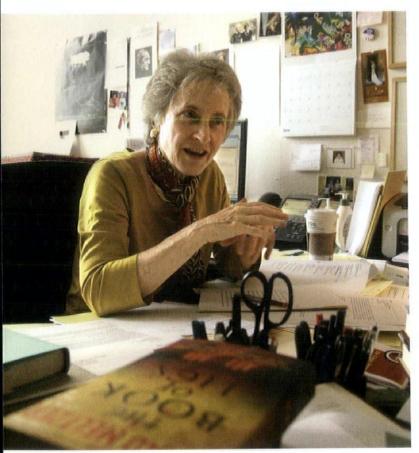
Deborah Weisgall: You have taken what has been considered "women's work" — though it was not in Tudor England — and added to it a technological dimension. How has that influenced your career?

Tricia Wilson Nguyen: Certainly having a PhD from a hardcore engineering discipline has given me a level of credibility when discussing textiles and embroidery — something that has been debased and relegated to "women's work" in the last 200 years. I try never to apologize for my feminine side. As a young woman, I made it in some of the toughest male-dominated situations: MIT, a PhD program, and leading a grueling military development program. I have my war wounds, and know how to turn someone who makes a snarky comment into an enthusiastic listener by adding just the right amount of serious tech talk. And often the men take my expertise in handwork more seriously than the women.

Jill Kneerim

director and co-founder of Kneerim & Williams at Fish & Richardson

Jill Kneerim is a founding partner, along with John Taylor "Ike" Williams, and a director of the literary agency Kneerim & Williams at Fish & Richardson. The agency is based in Boston and has offices in Washington and New York. One of the most prestigious in publishing, Kneerim & Williams' authors include former poet laureate Robert Pinsky, best-selling novelists Brad Meltzer and Sue Miller, and scholars Stephen J. Greenblatt, Caroline Elkins, Joseph Ellis, Dr. Susan Love, and Ned Hallowell. This year, the agency celebrates its 20th anniversary.



Deborah Weisgall: When you began, New York was the center of the publishing industry. Though Boston had two illustrious publishers, Houghton Mifflin and Little, Brown, pretty much every literary agent was in New York.

Jill Kneerim: When we first began, a lot of the writers said to us, Isn't it a disadvantage for you to be in Boston, since New York is the hub of the publishing industry? I answered that an agent is only as good as her clients, and, if you're good, everybody will pay attention. Now that question never arises. And communication has become much easier as well.

Deborah Weisgall: How much is Kneerim & Williams an outgrowth of the Boston intellectual community?

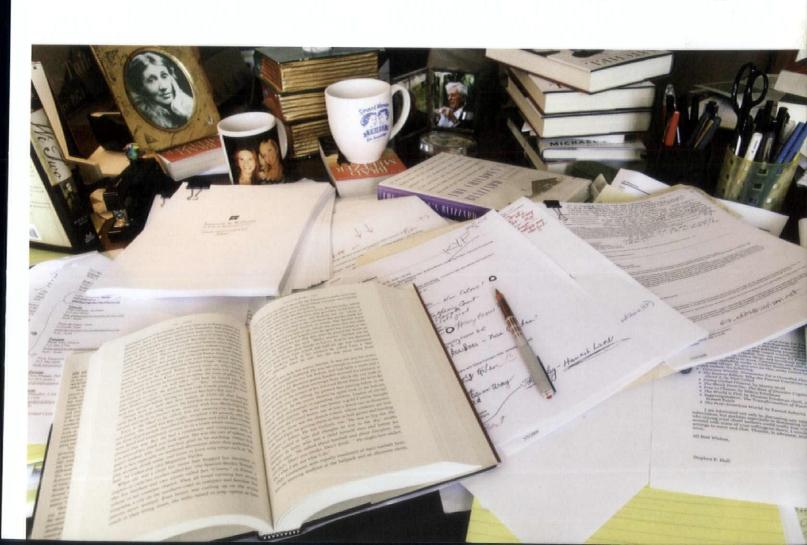
Jill Kneerim: The Boston area has the greatest concentration of colleges and universities of any city in the world, so it's a natural that we start looking for writers in our own backyard. One of our specialties — taking academics into public life — grows out of my longstanding interest in making accessible the work of people who do not normally write for a broad audience. First of all, I look for people who write well. Many academics haven't written for the general reader and sometimes could use advice about how to cast their ideas to make them appealing to that audience. I find that there are many people who are ready to try that, especially those who are mid-career and older, who already have tenure. It's a daring young scholar who can afford to try that kind of writing. People in the academic world have exciting ideas, and when they are good writers, it's a marvelous trip to be on with them. What's at the core of speaking to a wider public is knowing how to tell a story.

Because I'm in Boston, I tend to have a lot of clients in the academic world. Deborah Grosvenor, who heads up our Washington office, has a list skewed towards people from the national press corps. She has more journalists than I do, and they're writing policy books. We both do history, but I'm more likely to have an academic historian, while she has a journalist. I also think that being in Boston gives me an advantage because New York is so dominant in the book-writing business that it's easy to forget that there's any other place — and that people can look at the world differently from the way they do in New York.

Deborah Weisgall: How do you reconcile art and commerce?

Jill Kneerim: All art bridges art and commerce, unless you're living alone in a cave. There are so many ways these days in which artists and writers have to think about filthy commerce. We should stop resisting and learn that it's part of the game. And there's a lot of fun in getting every kind of client out into the book world. With a journalist, I'll have more of a chance to debate what the subject is going to be. Academics already have their specialties. I have one author who's been working on his book for 10 years. First, he had to spend a couple of years mastering a complex foreign language in order to conduct interviews in that language. Now he has a body of material that nobody else in the world possesses. Caroline Elkins, who won the Pulitzer Prize for her book Imperial Reckoning: The Untold Story of Britain's Gulag in Kenya, spent seven years gathering evidence. What I do is find someone whose ideas spark interest that would fire up a reader like me, who's not a specialist. Some subjects are too narrow — size is important.

I'm on the commerce side, but I adore being part of the link between writers — who, frankly, have been my heroes all my life. There is no one more exciting or important than a writer. I love being mixed up with writers and making a difference. All art bridges art and commerce, unless you're living alone in a cave. There are so many ways these days in which artists and writers have to think about filthy commerce. We should stop resisting and learn that it's part of the game.



Susan Williams

creative director of Swans Island Blankets

Swans Island Blankets is a company based in Northport, Maine that produces handwoven blankets from flocks of local sheep. All the dyeing and weaving is done in an old house, and sheep pastured on a small island off the coast supply thick wool for winter blankets. The designs - single colors, subtle color blocks, and stripes — rely for their effectiveness on the natural shades of the wool and on vegetable dyes. Susan Williams, one of the owners and the creative director, has built an international clientele for their products.



Deborah Weisgall: How have you combined old-fashioned technology with modern marketing?

Susan Williams: I wanted to apply the aesthetic of the product to the company as a whole. There is a great story behind the company - John and Carolyn Grace left law careers in Cambridge to pursue a more satisfying life weaving classic blankets on Swans Island. We've moved the operation to the mainland, closer to where we live. The core issue is to introduce the blankets to a broader market without wrecking their integrity. I've captured the story on our website and in our printed materials; it's no baloney when someone understands what "timeless beauty" means. Our aesthetic has substantially helped the company's growth, which is part of the reason why we receive so much media coverage — we operate on a minuscule marketing budget.

Deborah Weisgall: How do you set goals for growth?

Susan Williams: Our goals for growth are more or less driven by our financial and human resources. There's been some trial and error and postponing of great products — we produced some coats a couple of years ago that proved too labor-intensive and expensive. We quickly learned what we could accomplish while maintaining the highest standards, given the current scale of our business. We have four looms. Last March, when Michelle Obama wanted to give one of our throws to the prime minister of Ireland, we were lucky that we had a green one already on the loom.

We like to think of ourselves as the Slow Food of manufacturing, which probably sets us apart from other business models. We also offer a blanket hospital for cleaning and repairs. And this summer we introduced a line of yarns for hand-knitting, in colors that are consistent with our aesthetic.

Deborah Weisgall: How would you describe the satisfactions of the business?

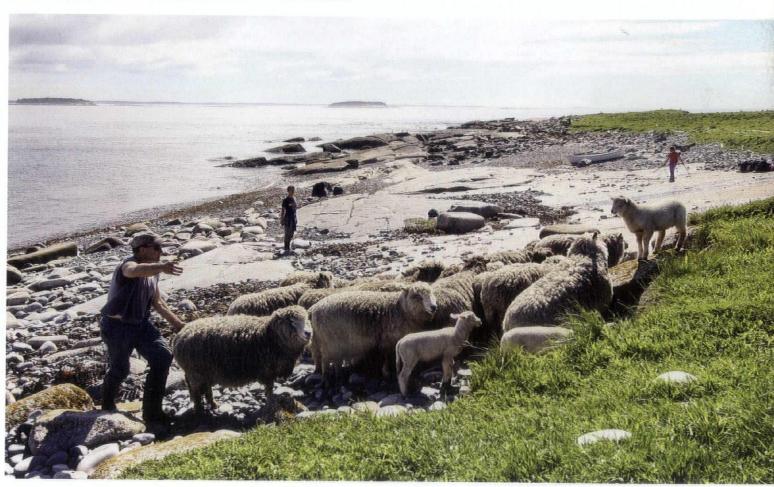
Susan Williams: They come from knowing that I am contributing to making products that are genuinely exquisite, practical, and simple. Our customers come from all over the world; they are unimaginably varied.

Deborah Weisgall: What is Swans Island's impact on the community?

Susan Williams: Obviously, we employ people — and it fits into this place because there are a lot of interesting and talented people running small businesses here. There seems to be a deep understanding and desire for our standard of quality - not only locally, but globally.



Our aesthetic has substantially helped the company's growth, which is part of the reason why we receive so much media coverage — we operate on a minuscule marketing budget.



Peter Mac Donald

lead artist for Rock Band, Harmonix Music Systems

Rock Band is one of the incredibly popular videogames developed by Harmonix Music Systems, Inc. in Cambridge, Massachusetts (others include Guitar Hero and Amplitude). In Rock Band, you and your band play gigs in clubs across the country and around the world, move up from van to tour bus, from simple chords to whole songs, from Seattle to Shanghai, doing everything (musically, at least) that real rock bands do, including hitting the camera. Playing these games, you navigate intense, intricately detailed visual and acoustical worlds. Peter MacDonald's first job after college was as an architectural draftsman; after a year, he left that field to develop games.



Deborah Weisgall: Your industry has gone from cutting edge to mainstream in about 15 years. What was it like to invent games when you started out; how does it compare to what it's like now?

Peter MacDonald: A small cadre of game developers has been plugging away since the late '80s; I joined the industry in 1995, working for a startup. It took five or six years to publish our first game, and our team was a pretty scrappy, disorganized bunch. Everyone had a wide swath of responsibility and a lot of room for creativity because we were making up our own intellectual property as we went along. I was an environmental artist, applying some of what I'd picked up from architecture and a lot of what I'd picked up from fantasy novels to create a virtual 3D world. It was

pretty fun, but in retrospect, we wasted a lot of time and didn't really know what we were doing. Most of us were right out of college. In 1995, you couldn't find experienced developers in Boston; there was a lot of talent coming out of the schools here, but not a lot of leadership. The whole company might be 20 or 30 people, mostly young, white, nerdy males.

Now the games I work on have budgets that are 10 times larger, and the teams and the company I work for are all 10 times larger. When I joined Harmonix four years ago, we had roughly 30 employees; now we have roughly 300. The game industry has matured; we have adopted standards and practices from other creative industries, and we strike a healthier work/ life balance. We're making better games in a shorter amount of time and without as much stress. One downside, depending on how you look at it, is that an individual's creative bubble of ownership has gotten smaller. On my first game, as an inexperienced artist, I created a whole world, almost entirely at my own whim. A junior environment artist on my team now will be able to build a handful of interior spaces under very close supervision.

Deborah Weisgall: How important is the location of Harmonix? Do you benefit from the critical mass of musicians and artists and high-tech people here?

Peter MacDonald: Absolutely. Harmonix was founded by two MIT graduates. Our art director went to the Rhode Island School of Design. I went to UMass Amherst. Many of our artists went to MassArt or RISD. However, most of the game industry is on the West Coast. In Seattle, if you were to go into a Starbucks and announce that you were starting a game company, you could be handed the résumés of several experienced developers before you finished your latte. Here in Boston, you need to attract a mix of raw talent out of all the universities, plus experienced developers who are willing to move back here. It's kind of tough to find the people you need, but this is starting to change because companies like Harmonix are meeting with success and growing. I hope that young people in school in Boston will start looking locally before jumping on a plane to Seattle right away.

Deborah Weisgall: How do environments and characters grow?

Peter MacDonald: Harmonix's games are unique in that the character and environment design are not closely integrated with the core gameplay. They have a supporting role. As a result, the artists have pretty free rein. We collaborate in small groups: five or six character artists on a game, with one leader and somebody like me overseeing all art. In terms of process, it's pretty straightforward. We determine our needs, start drawing concepts, do group

critiques, then more formal orthographic drawings to guide the 3D production. We hook up all the technology that will control the art assets, then it's tested and fixed. By the time the consumer sees the game, dozens of people have "touched" it.

Deborah Weisgall: Perhaps you can talk about the scale of your audience, their attention span, turn rate: the kinds of things you think about when you make games.

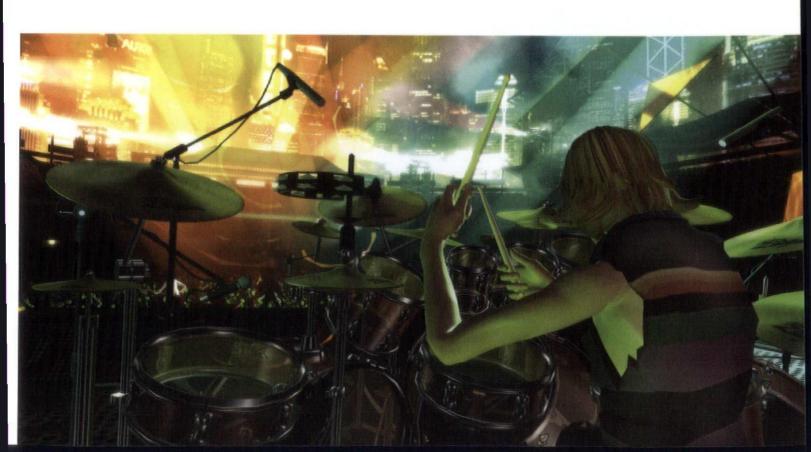
Peter MacDonald: The biggest games sell millions of copies every year; when you think about architecture on that scale, you're talking bridges, airports, and stadiums. Big stuff. I had a very small role on the design team for FedEx Field in Maryland. The stadium took perhaps 10 years from conception to opening day; Rock Band took one year. Then there's the lifespan; we hope that the Rock Band franchise will last for decades, but that's not typical in the games industry.

When we develop games, we spend a lot of time discussing the player experience. We use terms like "difficulty ramp," "play cycles," "hardcore," "casual," "stickiness," "story-driven," "achievement-driven," and whether something is "family-friendly" — or not. We try to identify a target audience, though if you are working in an established genre, the audience has already shown itself. We spend a great deal of time on the core musical interface and experience. Every little detail is debated. How fast do screen elements move? How saturated are the colors? How much information is too much? We basically operate on the knife-edge of human sensory cognition. That's how the game becomes challenging. If it moved any faster, or required the player to parse one more piece of information at the hardest levels, then it would become impossible and cross over from fun to frustrating.

Deborah Weisgall: How do you combine art and technology?

Peter MacDonald: The technology is our medium. Our products are experienced via a television screen and audio system, and interfaced by an instrument-shaped controller. That structure and the available technology define our limits. Technology is constantly changing, so we have to be adaptable; we are constantly learning. We try to exploit any new technology that might improve our game, but technology does not dictate our aesthetic goals. We might paint or draw characters that appear more detailed than we could achieve in the game for real, but it gives us a direction to aim for. The artists collaborate closely with the engineers who write our graphics software. We ask for the moon, and they work to give us the closest thing to the moon that the hardware can manage.

The technology is our medium, but technology does not dictate our aesthetic goals.



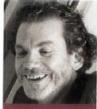


David Edwards talks with Jeff Stein AIA

With feet planted in the worlds of art and science, Harvard professor David Edwards is promoting new ways of catalyzing creativity and innovation.

CATALYTIC CONVERTER

- < Cloud Place (The Cloud Foundation); Boston. Photo by Joel Veak.
- David Edwards (left) by Bruno Cogez.
 Jeff Stein AIA (right) by Liz Linder.





David A. Edwards is the Gordon McKay Professor of the Practice of Biomedical Engineering at Harvard University. In addition to his groundbreaking advances in the field of drug delivery and medical aerosols, he is the author of two novels, *Niche* (co-written with Jay Cantor) and *Whiff* (illustrated by manga artist Junko Murata), as well as *Artscience: Creativity in the Post-Google Generation*. He is the founder of Le Laboratoire in Paris (www.lelaboratoire.org), an innovative cultural center featuring collaborative art installations by artists and scientists, and with his wife Aurèlie Edwards, he is the co-founder of the Cloud Foundation in Boston, which promotes art and creativity among urban youth (www.cloudfoundation.org).

Jeff Stein AIA is head of the School of Architecture and dean of the Boston Architectural College and is the architecture critic for *Banker & Trader*.

Jeff Stein: In his book *The Structure of Scientific Revolutions*,
Thomas Kuhn notes that great scientific advances are intuitive. It's only after the initial stroke of intuition — that "Aha!" moment in which scientists are really only guessing at something — that the left hemisphere of the brain kicks in and the experimentation, which is what most people think of as science, takes over. You've invented the term "artscience" to describe a kind of creative thinking. Are these concepts related?

David Edwards: Yes, absolutely, although Kuhn's work focuses on very recognizable "Eureka!" moments in the history of science. Artscience suggests that the process is less linear. Great innovations often come from two kinds of responses to a problem. One is the process of intuition and induction, which requires comfort with uncertainty and is often image-driven. The other frames the problem by simplifying it to a set of conditions that are identifiable and solvable — the scientific process of making a hypothesis, looking at the data, and drawing conclusions, which are often not what we expected and so require a new hypothesis. The artistic method and the scientific method fuse in key moments of innovation. The moments that are most memorable are the ones when we're standing in front of a blank page saying, "I don't really know what to do."

Jeff Stein: Your interests now seem to focus on the problem of that blank page and the idea that it often makes sense to cross the cultural divide between art and science and begin to fill in the blanks from the other perspective.

David Edwards: I increasingly look back at my childhood as a fount of information about everything I'm doing right now. If you look at how we learned as children, you realize that we were constantly moving from one environment, which we would get to know, to another, in which we had no clue. We went from crib to living room to school, constantly entering new environments and needing to throw away a lot of what was familiar in order to discover something new.

The hallmark of creative people is that they try to shock themselves. They try to go back to that state where they're throwing themselves into an unknown environment. I may be very familiar with the scientific environment, yet I find it very catalytic to my creativity to immerse myself in the artistic environment. Then, once I get adapted, I run back to the scientific environment and shock myself, like jumping into cold water, and suddenly I'm much more sensitive to what it is to be a scientist, to what that lab means, to all these things that I just grow numb to after a while. So I run back and forth. I think creative people often tend to run across this conventional art/science divide.

Jeff Stein: You've even placed yourself in that kind of situation in your personal life, dividing your time between Paris and Boston.

David Edwards: That's absolutely true. It's easy to point to all of the challenges of our age, but one of the benefits of the world today is the ability to live simultaneously in two very different cultures; that is a kind of art/science divide for me.

Jeff Stein: You're also crossing divides in your professional life. You were trained as a chemical engineer and have taught at MIT and Penn State as well as Harvard. And now you are also jumping back and forth into the worlds of commerce and nonprofits.

David Edwards: The reality is that, from an early age, I was really never comfortable in an educational environment, even though I ended up being very educated. I was often very frustrated with school. That probably started at age eight when I wrote my first novel. My teacher took it home, and her son dropped an ice-cream cone on it. I constantly had the feeling that what mattered to me didn't really matter in my school. In the late '80s and early '90s, I moved to Israel for four years. I had this idea that I could just live another life, and ended up becoming a very theoretical scientist, really loving my work. And I wrote. I've always been interested in writing, but it was a very private kind of passion.

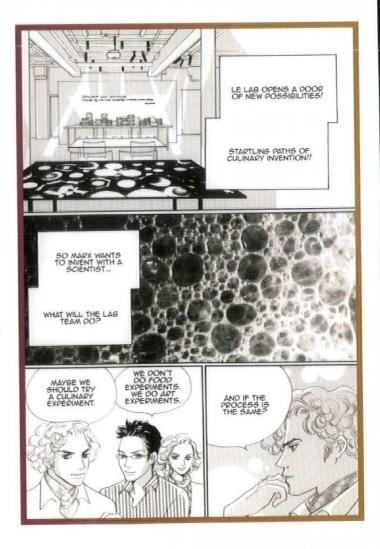
Jeff Stein: You kept a pretty low-profile until the late '90s when it seems that you had your own "Aha!" moment. What happened at that point?

David Edwards: Something very surprising happened to me: I published an article in the Journal of Science about delivering drugs, such as insulin, to the lungs in special kinds of aerosols, after which a venture capitalist approached me. He wanted to bet on my idea. I was at Penn State at the moment; I had left MIT a couple of years before that. I had no experience in industry and was both flattered and then frightened by the prospect that if I wanted to follow that opportunity, I would have to leave the scientific research environment that I had grown accustomed to, my comfort zone. We founded a company, Advanced Inhalation Research, which was sold within a year; the condition of sale was that I had to stay on for two years.

After that three-year period, I came back to Harvard to teach. I had left the university thinking I knew everything that I needed to know, and was coming back feeling as if I'd discovered everything that really mattered while I was away. I thought hard about how I could bring that experience to my students, this different way of learning.

One important element was that somebody had made a bet on an idea that I had, that someone believed in it enough to do that. And it pushed me, really pushed me to an edge, to take risks I never would have taken, just to prove my idea. So I started to teach a course where I encouraged kids to dream -I kind of bet on them.

This was during the Larry Summers years at Harvard — he was encouraging a lot of interdisciplinary dialogue on campus. I had started to write a novel more seriously, and my wife and I had started the Cloud Foundation to bring arts programs to urban kids. As I became more and more involved in the arts, I noticed that most of the university interdisciplinary dialogues were among the scientific disciplines; the humanities in general were not included. So I started a dialogue with a group of people, about 11 of us, from a music theorist to a composer to an architect to a medical doctor; people who, like me, rather than being driven away from this art/science divide at Harvard, were attracted to it for different reasons. All of us were very different, but we had similar experiences in that we were all celebrated by our institutions, but none of us had really been nourished by them. And we had all fled our institutions at key moments in our creative process. I suddenly understood why I had been doing so many different, weird things in my life, and what the writing had actually represented for me. The outcome of this reflection was a book, Artscience, and the idea of Le Laboratoire, an experimental center promoting artscience collaborations.





< This page: Le Laboratoire; Paris. Photo by Bruno Cogez. Left page: Manga art by Junko Murata; excerpted from Whiff © 2008 by David Edwards; published by Éditions Le Laboratoire (distributed in the US by Harvard University Press).

into phases: a starter or conception mode, a translation mode, where we're developing an idea, and a realization mode. We gravitate toward the environments that support those phases.

Jeff Stein: In other words, we are possessed of brain, voice, and hands, and we're working with one of them at a time, but all three of them together get us where we want to be.

Jeff Stein: So you became homo faber, he who makes, not just he who thinks. And as a result, your title is not professor of biomedical engineering, but rather professor of the practice of biomedical engineering.

David Edwards: It's ironic, because, 15 years ago, I was a very theoretical scientist. I have since learned that discovery is an active process. It's an active confrontation with a mysterious, evolving, unimaginable world.

Jeff Stein: There has been a lot of talk lately about the sorts of people and the kinds of activities that make up the Creative Economy — which at some basic level is about this process of discovery and the translation of ideas to some useful purpose: products, jobs, positive change.

David Edwards: We're seeing an incredible rediscovery of the power of human creativity, and the possibility to transform our world in potentially beneficial ways. The challenge is how to integrate that into institutions, particularly into educational institutions. How do we teach that? The Creative Economy is a huge reality here in Boston, one that doesn't exist in such a dynamic way in many other places in the world. Our challenge, right now, is how to grow that.

Jeff Stein: As you've thought about the creative process, have you found any commonalities that suggest that there is a teachable formula? Is there, for example, an identifiable moment when you switch brain hemispheres or when the artistic trumps the scientific?

David Edwards: I'm really skeptical of the "how to" approach to being creative; all the really creative people I know have never followed that sort of path and probably would not even want to analyze their creativity. But here's one observation: I think that creative people are very sensitive to their dependence on environment, both the human, or architectural, environment and the intellectual, or creative, environment. So they tend to put themselves in stimulating environments. Creativity seems to fall

David Edwards: Yes — that's an interesting way to put it. One problem in our understanding of creativity is that our social and cultural institutions are mostly designed to measure and encourage manifestations of ideas, which often substitute for creativity itself. When a book is published, or a product is manufactured, or a symphony is performed, the key moments of the creative process are invisible. In the course of a creative endeavor, you're going to make lots of mistakes. But creators don't see them as such — they're producing prototypes, so of course there are mistakes; you learn through multiple iterations. That may go on for days, weeks, months, even longer. But that's when everything's happening; those are the key moments. So I think for the creative process to be really alive and active, as it is in a healthy childhood, we need to be frequently thrown into that mode where everything is evolving, where we don't know where to go next.

Jeff Stein: And that mode is often found in an artistic environment. So, the creative mind can be developed through exposure to the arts, and yet the arts aren't as valued politically here as in France, where you spend the other half of your life. Can we change that?

David Edwards: There is a need today to demonstrate the value of the arts in America, beyond the ability to sell a work of art to a major museum. The arts are hugely relevant to culture, to humanitarian engagement, and to industry, and there's a need to integrate the arts into all that we do. The Cloud Foundation is an effort to advance that idea by working with the Boston public schools. My wife and I did not grow up with money. Selling the company was very exciting, of course, but it was also disorienting - not in a negative way, but just in trying to understand it. We made a decision right away that we wanted to give away at least half of what we made, and we wanted not to just write checks but to be actively challenged by the process. So we created the Cloud Foundation, which has since worked with thousands of kids through its headquarters at Cloud Place on Boylston Street in Boston.

The Foundation has recently entered into an exciting new

phase with the recent launch of our first ArtScience Innovation Prize competition for Boston public high school students. Its purpose is to help them develop the tools for cross-disciplinary learning and creative thinking. We provide them with up to 100 breakthrough ideas, very "blue sky" art and design ideas at the cutting edge of science. They then work with mentors scientists, artists, and entrepreneurs — and participate in workshops at Cloud Place and the Idea Translation Lab at Harvard to help them think about how to translate these ideas into project concepts, which could be new products, for-profit companies, museum exhibitions, nonprofit organizations, anything. Teams will present their ideas to a panel of judges this fall, and the winning team will receive \$100,000 and a trip to Paris to continue its work at Le Laboratoire. The goal here is to bet on kids, to get them to learn early on that their passionate commitment to ideas that cross boundaries can be transformative.

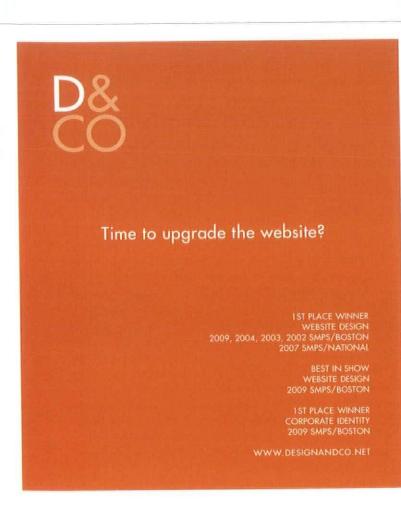
Jeff Stein: Besides the Innovation Prize, what goes on at the Cloud Foundation on a daily basis?

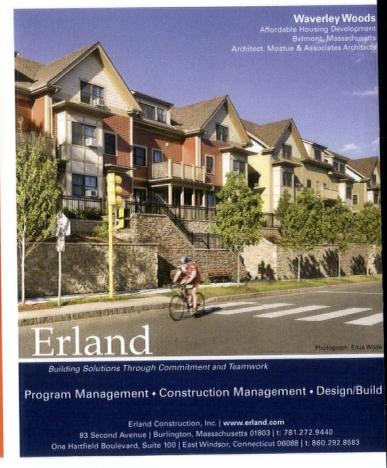
David Edwards: We talk to 10,000 kids a year but work principally with the hundreds of kids who come in for after-school art workshops and programs. We sponsor exhibitions and events and work in partnerships with other organizations in the city. In general, Cloud Place is a kid place where kids are the curators. Working

with kids means dealing with problems of kids, so there are lots of sit-down conversations and moments with kids from struggling neighborhoods in Mattapan and Lynn in which you sometimes hear things that are very powerful and sometimes difficult or hurtful. The Cloud is a window into the life of our young generation.

Jeff Stein: You have a sister organization, Le Laboratoire, in Paris, which is more for adults and sponsors projects between artists and scientists.

David Edwards: The Lab, as I call it, is a cultural institution in the center of Paris that is closely partnered with Cloud, Harvard University and, increasingly, Trinity College in Dublin. It includes exhibition space and a design prototype store, where you can buy things that you can't buy elsewhere. As prototypes, they may not work perfectly. There's also a food lab, a wild place where we're producing food innovations with the renowned chef Thierry Marx, who we think of as a kind of culinary artist. Our challenge is to invite the public into art as process, as opposed to art as outcome, which is the fundamental distinction of a cultural lab versus a cultural museum. We do a few experiments each year with major artists and scientists. The idea is to create a new kind of translational lab, in this case a cultural lab, which is creating value that we can measure. We're doing an experiment at the Louvre right now. I'm hopeful that the Lab will invite major investment from both government and venture capitalists.





Jeff Stein: Your new novel *Whiff* is a fictional account of an actual process that led to a new product from the Lab just last spring.

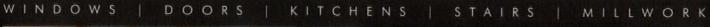
David Edwards: Yes. The product is Le Whif, an aerosol inhaler that delivers the taste of chocolate, without actually eating the chocolate. Zero calories. The novel was written with the idea of engaging the public in the drama of the creative process, which is hard to convey in an exhibition space. The food lab led to thinking about art and food and science, which led to the idea that maybe you could inhale food - I do know a lot about aerosols. I gave the idea to some students and they inhaled substances like mint and pepper - although the pepper was a disaster. At the end of the semester they said, "This is really cool, but we can't stop coughing." So we figured out how to get around that, and then included a Nespresso Whiff Bar in a culinary art exhibition at the Lab. It made a lot of news - people were enchanted by the idea even though many coughed. So we improved the design and now finally have a commercial product. We planned to sell it in our LaboShop and at Colette, a high-end store in Paris, and on the Internet. But then a young, former student, who is a brilliant entrepreneur, decided to start a viral campaign. That was a Friday in early April. By Saturday, our Internet traffic had doubled. Two weeks later, we were being asked for interviews on Oprah and Good Morning America and weeks later we'd received inquiries from distributors in 40 countries around the world.

Jeff Stein: You're describing creativity as a constant state of metamorphosis.

David Edwards: Or to turn that thought around, it is at the frontier of knowledge where we all become artists. Metamorphosis is confusing, chaotic; a scientist at a frontier of knowledge is not sure of anything. Take Judah Folkman, a man I really admired, a pioneer in the field of angiogenesis in cancer research, which focuses on blood supply to tumors. For years and years, he stood at a frontier with no proof that this frontier was really what he thought it was.

Jeff Stein: With your novels and products and teaching and the Cloud Foundation and the Lab in Paris, you're really kind of a bridge builder. The Japanese have a term for this: hashi. It means the end of one thing and the beginning of another. And that can be a bridge. It could be chopsticks, which is the end of food on the plate and the beginning of food in your mouth.

David Edwards: I love that concept; it's another way of thinking about metamorphosis. Our civilization is undergoing a metamorphosis right now, and at the same time I think that we all feel pulled toward this frontier of knowledge. It's a very chaotic, confusing era. But this is precisely the time in which the arts have a major role to play in every sector of society. The arts can teach us how to embrace the chaos and turn it into a moment of enormous creativity.





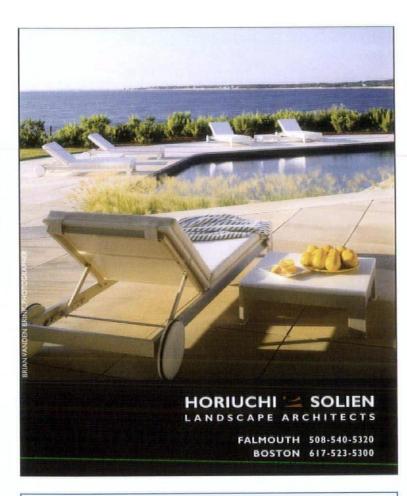
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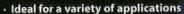
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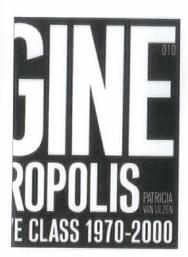
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IMAGINE A METROPOLIS: ROTTERDAM'S CREATIVE CLASS 1970-2000

By Patricia Van Ulzen 010 Publishers, 2007

about the role of Rotterdam's artists, planners, and impresarios in the economic and physical development of the city

Imagine a Metropolis is a gossipy book

since 1970. Although the book delves too deeply into insider stories to appeal to most readers, this detailed account of the cultural history of Rotterdam has important lessons for capitalizing on our

own post-industrial past.

Since the 1920s, artists, architects, and cultural commentators have created a robust representation of Rotterdam as the modern doppelganger to the historical capital city of Amsterdam. In the 19th century, Rotterdam's port eclipsed Amsterdam in size and importance and, in the 20th century, it emerged as the largest in Europe. Port functions and associated industries that sprang up along the River Maas injected the city and environs with a character that was mythologized by 20th-century photographers and writers. In addition, the Rotterdam school of architecture, as exemplified by the Van Nell factory and architects like Mart Stam and J.J.P. Oud, was contrasted with the contextual brick architecture of the contemporary Amsterdam School.

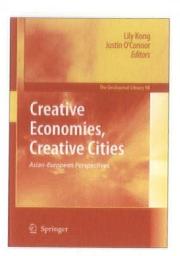
The bombing of Rotterdam in World

War II by both the Allies and Germans (reflecting the strategic importance of the port) meant that most of the city was rebuilt in a postwar Modernist style, thus fulfilling prewar Rotterdam's image of itself as a modern metropolis. In the early 1960s, the auto-dominant planning that characterized postwar Rotterdam was criticized by an emerging cultural elite that initiated several projects to reintroduce a pedestrian scale and natural landscape elements to the central city. But by the late 1970s, the edginess of Modernist Rotterdam was re-embraced by independent filmmakers and proponents of New Wave music who found the gritty industrial landscape the perfect backdrop to their aesthetic.

Ironically, the port authority became the biggest champion of the underground creative class by giving a group of architects and artists a former waterworks facility for use as studio and performance spaces in the late 1970s. Called Utopia, this same group implemented Ponton 010, a floating theater and bar that seated 1,100 people. Ships and cranes served as the moving backdrop for concerts and other kinds of performances. As a result, the port landscape became the galvanizing spectacle of modern Rotterdam.

While Boston is more similar to Amsterdam, there are useful comparisons between Boston and Rotterdam including the role of the underground music and arts scene in the 1970s. Like Rotterdam, Boston is also exploring strategies that reconcile the working waterfront with a revitalized urban culture and needs to consider initiatives that better coordinate official cultural policy with a vital and entrepreneurial underground culture. Van Ulzen makes a convincing case that representations of a city, even if they are amped up to the level of a stereotype, can become self-fulfilling.

Tim Love AIA, LEED AP is a principal of Utile, Inc. in Boston and an associate professor of architecture at Northeastern University.



CREATIVE ECONOMIES, CREATIVE CITIES: ASIAN-EUROPEAN, PERSPECTIVES

Lily Kong, Justin O'Connor, eds. Springer, 2009

Why are signs of urban regeneration so

unevenly distributed? Some cities -Boston, for example - have reinvented themselves, while others - such as Detroit - have not. Readers of Jane Jacobs may have suspected the cause, but we needed economist Richard Florida's seminal 2002 work The Rise of the Creative Class to validate it. Florida's research shows that cities that host creative individuals and enterprises do better than those that don't. It's only a short beat from there to the thesis that cities can improve their economies by making themselves hospitable to creative industries. Seven years later, Florida has become the rock star of urban resurgence, and there is nary a beleaguered city in America that does not aspire to a creative economy.

Creative Economies, Creative Cities, an edited collection of articles by academics from Europe, the Far East and Australia, puts Florida's thesis in global and historical context. The book mines a rich vein of debate that began long before 2002 about the effectiveness of the Creative Economy idea. It seems that Florida is less an innovator than a synthesizer and popularizer whose genius, like Henry Ford's, is to integrate advances by others

and put them into production.

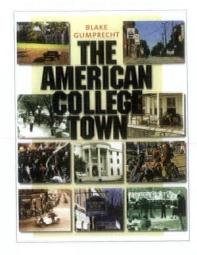
The book is a kind of echo chamber for academics and policy-makers, with authors citing each other's works and taking positions on sometimes narrow questions of economic and cultural policy. The authors worry about how to define creativity, whether it resides in the individual or in the collective enterprise, how to measure its economic impact, the effectiveness of creative clusters, how exportable creative policy is, and how to avoid homogenization and gentrification. Defining creativity broadly to encompass technological innovation encompasses videogame developers, the focus of an article that addresses why all Asian cultures except Japan are imitators rather than innovators.

Most of these pieces originate in social democracies in northern Europe or the more authoritarian national cultures of China and Singapore, where government has a big footprint and there is less debate about whose culture is being promoted. So why has the Creative Economy thesis

become so popular here in the US, where we tend to rely on private philanthropy rather than government to enrich domestic life? Perhaps because it provides a pragmatic rationale for public support for cities and for the arts which overcomes the culture wars about elitism.

But the book's many competing voices suggest that these policies may prove trickier to implement than they appear. Once you frame the goal as economic development, cultural excellence becomes secondary. And it's hard to engineer serendipity anyway, so maybe all you can do is to create the circumstances that allow it to arise and hope for the best.

Matthew J. Kiefer is a land-use attorney at Goulston & Storrs in Boston. He teaches in the urban planning program at Harvard Graduate School of Design.



THE AMERICAN COLLEGE TOWN

By Blake Gumprecht University of Massachusetts Press, 2008

Blake Gumprecht is passionate about college towns. He has spent most of his adult life in them and has written a lively and engaging book that should be required reading for the many architects and planners in Greater Boston charged

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A professor of geography at the University of New Hampshire, Gumprecht begins with an excellent history of the college town and why it is a uniquely American phenomenon. He focuses a keen geographer's eye on the subject and has definitely done his legwork, traveling to dozens of places and interviewing a full range of students, faculty, administrators, politicians, and townies. He provides exhaustive - sometimes too exhaustive details about the demographics and makeup of college towns, and how to distinguish one from a place that merely has higher education in its midst. But it's sometimes difficult to understand why he lavishes attention on certain places at the expense of others - we hear far too much about Ithaca, New York and the Kansas towns of Lawrence and Manhattan, for example. Oddly, for a man who teaches in New England, our region is strangely underrepresented in the book, as is the

South. Geographic diversity, anyone?

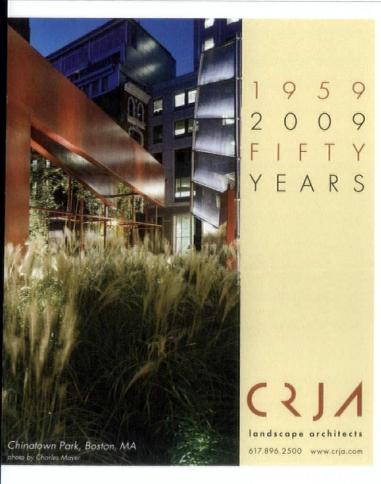
Gumprecht and his fellow collegetown habitués seem at times a little too satisfied with themselves: "Youthful and eclectic, unusually cosmopolitan for towns of their size, with more bookstores and bars per capita than other cities, the business districts of college towns display a free-spirited distinctiveness..."

But having provided this overly gushing description early on, he redeems himself later by pointing out how college-town residents seem to personify our national culture of contradiction. They see themselves as bastions of tolerance, eccentricity, and freedom, but don't want rowdy student neighbors; they claim to be for the underdog, but don't want any housing development that might attract new residents or erode their own property values. He takes to task the left-leaning residents of a major California college town as follows: "There is ample evidence to suggest that support for liberal causes in Davis has been unreliable, selective and motivated more by selfishness than

concern for the greater public good." Go Gumprecht!

The author ends on a positive note — not only are college towns not going anywhere, but they also stand to be the winners in the ongoing national competition for the "knowledge economy." But college towns are like "artsy" neighborhoods — once they become a bit too smug and affluent, they lose the funky authenticity that made them special to begin with. It is this funkiness that Gumprecht celebrates, and he's not afraid to point out that, sometimes, the enemies of local collegetown character are the very ones who claim to be its champions.

James McCown is a Somerville, Massachusetts-based writer specializing in architecture and design.





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THE CREATIVE ECONOMY

www.creativeeconomy.org

The New England Foundation for the Arts is a longtime advocate for the Creative Economy in this region. Serious work here, including white papers and reports — and great resources.

HIRE CULTURE

www.hireculture.org

The free job search engine sponsored by the Massachusetts Cultural Council. And yes, there are postings!

THE CREATIVE CLASS

www.creativeclass.com

Download a photo of Richard Florida and hear the latest about the creative class direct from the guru himself.

CREATE EQUITY BLOG

http://createquity.blogspot.com

A blog exploring "the link between art and business in a creative society," with posts that take on the Richard Florida juggernaut and links to an amazing array of creative people, places, and organizations.

INNOVATION PHILADELPHIA

www.innovationphiladelphia.com

This impressive economic development organization extends Philadelphia's Brotherly Love across 11 counties and three states, with the goal of attracting a young, innovative workforce and making Greater Philadelphia a world-class destination for creative businesses.

ARTSCAPE

www.torontoartscape.on.ca

A nonprofit that "revitalizes buildings, neighborhoods, and cities through the arts." What happens when artists, community activists, and environmentalists are part of the redevelopment team? A model worth examining.

DAN PINK BLOG

www.danpink.com

Career advice from Charles and Ray Eames! Emotionally intelligent signs! Right-brainers will soon rule the world! OK, maybe not. But maybe!

MASS MOCA

www.massmoca.org

The largest center for contemporary art in the US is now 10 years old. Mass MoCA brought economic development to the city of North Adams and western New England through its provocative visual and performing-art programs. Happy birthday!

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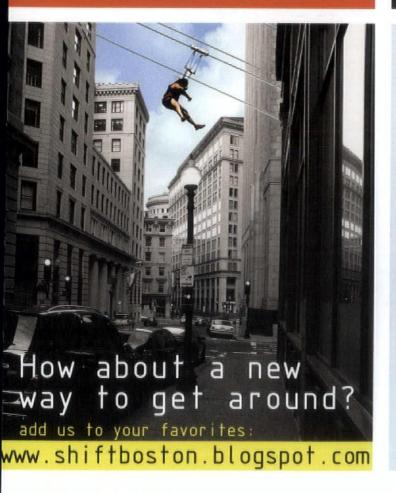
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Channel Center, Fort Point

V Photo by Eric Levin; concept by Rob Smith.

My six-year old neighbor most accurately describes what's different about living in an artists building. He says, "All the grownups will play with you."

Our particular building, Midway Studios, is discipline-diverse. The live/work lofts house artists of all kinds: painters, sculptors, writers, photographers, poets, filmmakers, actors, dancers, and musicians; several collaborations (and my current employment) have started with conversations in the elevator. To rent here, you must be certified as a Boston artist through an anonymous review process administered by the Boston Redevelopment Authority. This helps ensure the caliber of work produced - we are home to two Guggenheim award-winners and several published authors. Apart from peer pressure, this is an incentive to make serious work, since certifications are periodically renewed and required for housing. Cease to meet the standards and you must move out.

Loft living is not ideal for all artists. It is expensive, and the changing development landscape makes our future uncertain. Some people leave because they can't get their kids into local schools; some simply yearn for green space. We have few conventional features here and have forged a kind of artificial environment to create a more balanced reality.

When there is a snowstorm, Fort Point is quiet and unplowed — perfect conditions for cross-country skiing. Phones ring and text messages go out with invitations to venture outside. Making our way across parking lots and along the Harbor, we discuss city politics, our families, national news. We talk about the changing neighborhood, bet on which developments will actually get finished, reminisce about the old days over hot chocolate.

Mostly we extend invitations for shorter trips — to the hardware store, to do laundry, to have a glass of wine. Summer brings



other invitations, for activities that might seem more at home in a traditional New England town. We have a neighborhood softball league and hold potluck barbecues on rooftops. We sometimes paddle through the locks and up the Charles River in kayaks kept in parking garages. A movie series is screened outdoors onto sheets in our tiny park; the previews are often our own short films, and some of the most popular features are Hollywood films we have written or acted in or movies that have been shot in Fort Point (Adaptation, Gone Baby Gone, The Departed).

We compensate for living and working in one room by treating the neighborhood geography like a large house. Landmarks are referred to as if they were rooms. A group of us meet for coffee most mornings in "the kitchen," a spot on the banks of the Channel. We talk about recent openings, share recipes and advice. We play nicely, although envy or longstanding grudges about being passed over for a show are occasionally revealed over scones. Our "great room" is a local bar with '70s paneling, a piano and TV, and - always familiar faces. We sometimes buy milk there, or even the occasional tomato or

piece of fruit, from sympathetic staff who understand the cold cruelty of a long late-night walk to the 7-Eleven on the Harbor. Barter is official currency in Fort Point, and we extensively trade services and artwork in exchange for food or equipment.

Some of us are here because we don't fit anywhere else. The eccentricities of our work life - "days" that begin at 7pm, the tendency to go out in public in torn, paint-stained clothes - aren't well tolerated by most people. Some of us are here because we've been kicked out of studio space, marriages, or countries. If you are broken, Fort Point is a good place to get put back together.

It's like living in a village full of extended family. We're related by art. Generations are marked by the date you settle here, lineage determined by your standing in the art world. Like most families, our clan is strange (but reliable), and occasionally susceptible to squabbles and cliques. But you always have a place at the table if you want to come down for dinner.

Sylvie Agudelo is an artist and new business director at Stoltze Design. She has lived or worked in Fort Point for 19 years.



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